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NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE Dr G. M. FARMER

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THE UNIVERSITY OF ALBERTA

FILING EQUIPMENT, SYSTEMS, SUPPLIES, TASKS, PERSONNEL,
AND ANTICIPATED CHANGES AFFECTING FILING IN SELECTED
BUSINESSES IN EDMONTON, ALBERTA

by



MORAG VIOLET PANSEGRAU

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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DEPARTMENT OF SECONDARY EDUCATION

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SPRING, 1979

THE UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Filing Equipment, Systems, Supplies, Tasks, Personnel, and Anticipated Changes Affecting Filing in Selected Businesses in Edmonton, Alberta" submitted by Morag Violet Pansegrau in partial fulfilment of the requirements for the degree of Master of Education.

Geraldine M. Farmer
Supervisor

Douglas V. Parker

Norman H. Smith

Date *April 2, 1979*

ABSTRACT

The purpose of the study was to identify the filing equipment, systems, supplies, tasks, and personnel associated with filing, and to identify the anticipated changes which might affect filing in fifteen randomly selected business and industrial enterprises (five small, five medium, and five large) in Edmonton, Alberta.

Drawer cabinets, lateral files, shelves, and card files were the four types of equipment used by the greatest number of companies included in the study. The filing equipment was comprised of uncoordinated units in all fifteen companies, and most of these companies retained filing equipment in a combination of centralized and decentralized locations.

Records were retained in paper form in 100 per cent of the companies included in the study. Additional forms in which records were retained were cards in 73 per cent of the companies, computer cards in 33 per cent, computer tapes in 33 per cent, microfiche in 27 per cent, and microfilm in 13 per cent.

The alphabetic name, subject, and numeric filing systems were the systems used by the greatest number of companies to retain paper and card records. The alphabetic name and numeric filing systems were the systems used by the greatest number of medium and large companies to retain non-paper records. No small company retained non-paper records.

Records were microfilmed in only one company, a large company. Microfilm readers were available in two large companies, and microfiche readers were available in one medium and three large companies.

Manual record retrieval was employed by all fifteen companies and was ranked first by all the companies; computer-assisted record retrieval was employed by nine companies (four medium and five large) and was ranked second by most of the companies.

The types of filing supplies used in most of the companies included standard folders, hanging folders, folders with special features, guides, compressors, dividers, plastic push-on tabs, cardboard tabs, self-adhesive tabs, gummed tabs, colour-coded tabs, gummed folder labels, self-adhesive folder labels, and colour-coded folder labels.

A total of 212 full-time and "part-time" (i.e. employees who performed filing tasks as part of the assigned work duties) file clerks were employed in the companies included in the study. Approximately three quarters of these file clerks were female, and approximately one quarter were male. These 212 file clerks comprised approximately one third of the total number of office workers employed in the 15 companies.

Access to the files was given to all employees in most small and medium companies, but access to the files was limited to particular employees and/or to particular files in most large companies.

Administrative employees performed decision-making filing tasks in most of the companies included in the study, and clerical employees performed simple filing tasks delegated by administrative employees. In most of the companies, the administrative employees performing the decision-making filing tasks were male, and the clerical employees performing the simple filing tasks were female; however, in some small companies, female clerical employees performed the decision-making filing tasks.

"File Clerk" was the official job title of the full-time filing employees. The official job titles of those who performed "part-time" filing tasks included a wide range of personnel at various levels of employment from "President" to "Junior Clerk."

Thirty-two filing tasks were performed in the companies included in the study.

Pre-employment qualifications for full-time and "part-time" file clerks were not demanded nor desired by most of the companies.

Although formal training for full-time and "part-time" file clerks was provided by few companies, informal training for such file clerks was provided by most of the companies.

Written filing instructions located in a general company manual or in a separate filing manual were provided by 33 per cent of the companies.

Fifty-three per cent of the respondents stated that filing instruction should include a brief course in high school followed by on-the-job training; 40 per cent of the respondents stated that filing instruction should be provided entirely on the job.

Only 7 per cent of the respondents (one small company) stated that the high school should be entirely responsible for providing instruction in filing.

Weaknesses in beginning file clerks were perceived by 67 per cent of the companies employing full-time file clerks, and by 40 per cent of the companies employing "part-time" file clerks. The weaknesses related to filing, job attitude, and general level of education.

Short-term changes were anticipated by 33 per cent of the companies, and long-term changes by 27 per cent. Only large companies anticipated both short-term and long-term changes. The anticipated short-term changes appeared to be related to improvements in the daily operation of the filing systems and procedures whereas the anticipated long-term changes appeared to be related to improvements in records management.

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Chapter I

THE PROBLEM AND ITS SETTING

Business and industrial enterprises must retain papers that have legal or informational value and must be able to retrieve these papers quickly when they are required. These papers become the records of the company, and filing is the name of the process employed to retain and retrieve such records. For the purpose of this study, "filing" is defined as the "process of classifying, arranging, and storing records so that they will be obtainable quickly when needed" (Johnson and Savage, 1968:325). This process is a basic office task that involves most office employees in some capacity daily:

Typists, accountants, stenographers, key punch operators, computer operators and general clerical workers all use files frequently. No office worker's job preparation is complete without a knowledge of filing. Although he may not be directly involved in the filing process, his effectiveness will be increased if he knows the problem of the file worker and he understands the importance of systematic filing (Kahn, Yerian, and Stewart, 1971:7).

Researchers from 1924 to the present have conducted task analyses to determine the tasks performed by office employees. All such task analyses have shown filing to be an office task performed by many office employees, even though filing tasks are not listed in the official job description.

One of the basic goals of the Business Education curriculum in Alberta is to provide students with the skills and knowledges necessary

to obtain employment in the business world. Accordingly, filing instruction may be offered in Alberta high schools in the Business Education courses Business Procedures 20 and Office Procedures 30 and the concepts covered in the two courses are the following: the function and importance of filing; filing systems; filing equipment and supplies; filing procedures; and modern technology and changing procedures for managing office records (Business Procedures and Office Procedures Curriculum Guide, 1975:8,34).

In the school year 1977 to 1978, Business Procedures 20 was offered in Alberta high schools to a total of 1,968 students, of whom 214 were male and 1,754 were female; and Office Procedures 30 was offered in Alberta high schools to a total of 1,669 students, of whom 45 were male and 1,624 were female (Student Evaluation, Alberta Education). Because students enrolled in Business Procedures 20 and Office Procedures 30 are being prepared for the world of work, the tasks performed by the students in school should be similar to the tasks performed on-the-job. To ensure that the filing instruction received in these courses is vocational and relevant, the filing practices of business and industrial enterprises should be investigated periodically.

The purpose of this study is to identify the filing equipment, systems, supplies, tasks, and personnel associated with filing, and to identify the anticipated changes which might affect filing in selected private (non-governmental) business and industrial enterprises in Edmonton.

NEED FOR THE STUDY

The first two general objectives of the Alberta Business Education Program are as follows:

1. To provide a meaningful study of the business environment including the ideas, people, and objects or tools of business.
2. To provide for the development and acquisition of business knowledge and skills which will be most useful and durable in a rapidly changing society (Business Procedures and Office Procedures Curriculum Guide, 1975:1).

One of the goals of the Business Education program is to graduate students who are trained to perform jobs as they exist in the labour market today. The Business Education program has no choice but to keep vocational and relevant, to do otherwise "would be to violate its primary objective of equipping youth with the knowledges and skills necessary to get and hold existing jobs" (Leventhal, 1972:213). But vocational programs do not always provide training that is both current and relevant. Educational and business literature repeatedly urges that "occupational training must be based upon performance required in the actual job" (Selected Entry Jobs, 1965:7). Basing occupational training upon actual job performance requires investigation of the impact of changes in the office upon office jobs and job requirements (Farmer, 1967:87). Then, when the effects of change in the office are known, educators need to analyze vocational courses with a view to improving their relevance (Farmer, 1967:88).

The most common method of determining the effect of changes in the office is to conduct studies of the duties and tasks of office employees. Such studies have been conducted throughout the last fifty years. In 1924, Charters and Whitley conducted a classic study which listed clerical duties and traits. The most important benefit derived from this study was the establishment of a basis for determining the secretarial curriculum. In the years that followed, similar inventories have been collected by Potter (1944), Berry (1963), Malsbary (1968), Perkins and

Byrd (1968), Erickson (1971), Frame (1971), Bumanglag (1972), and MacPherson (1976). All the preceding studies of office duties and tasks included a section on filing. However, few studies have been conducted that investigate in detail the filing tasks of business and industrial enterprises. Studies relating specifically to filing have been conducted in the United States of America by Johnson (1958), Harley (1969), and Skinner (1973). To date, no study relating specifically to filing has been conducted in Canada. Consequently, there is a lack of information concerning the filing practices of business and industrial enterprises in Canada. Over twenty years ago, Johnson (1958) reported the lack of studies in filing and urged that research be carried out in this field. The Delta Pi Epsilon Research Projects Committee (1972:9) identified as needed research in Business Education the study and comparison of records management systems used in business. Skinner (1973) called for more local community surveys to determine the filing practices of enterprises in the business community in which students will eventually be employed. To date, these recommendations have not been carried out, even though it is imperative that business educators know the filing practices of the local business community if filing instruction is to prepare students for office jobs. Too often, as Huckabay (1968:21) states, curriculum planners have relied upon the teachings of educators who might be reliving the past, or upon the study of another community, or upon a study made more than five years ago within their own community. Lambrecht (1976:78) states that office education has been vulnerable to the criticism of "teaching too much that is not used as well as not teaching newer office skills and procedures."

In addition, she states that the clear message coming from industry and from leaders in business education is that the recent advances in office technology have resulted in the need to consider new content areas and reexamine the traditional areas for modification and changes in emphasis (Lambrecht, 1976:82).

There is reason to believe that the filing practices of business and industrial enterprises may have changed in recent years as a result of the phenomenal increase in the amount of papers produced and retained by businesses. As Oliver (1975:65) states:

Each year more letters are written, more forms created, more reports prepared, more directives issued, more papers filed, more mail handled, and a significant increase in paperwork is generated through computers and copiers.

The fallout from the information explosion has, without question, been paperwork (Kahn, Yerian, and Stewart, 1971:v) and offices have to cope with this paper explosion. How they cope is essential knowledge for curriculum developers and business educators.

Not surprisingly, this rapid growth in the output of papers from businesses has been accompanied by an increase in the number of people employed in clerical occupations. White collar workers compose the largest group of workers in the North American labour force today, and a major segment of these workers is included in the clerical work force, "a group recruited to handle paperwork and other activities essential to the effective operation of the firm" (Johnson and Savage, 1968:3).

A survey of the literature reveals that the increase in the output of paper and the number of clerical workers can be attributed to many forces:

1. The industrial growth of the economy.
2. The increase in size of individual businesses; as managing personnel get farther away from customers and employees, more records are used to span the gulf.
3. The growth of service industries facilitating business operations has expanded office work tremendously; in fact, the most rapid expansion in the economy is taking place in services.
4. The increase in employee services.
5. The employment of more factual information by managers.
6. The demand for statistics, accurate information, and carefully prepared statements.
7. With the availability of more information, there has been a tendency to distribute information to all interested persons.
8. Of tremendous significance, the vast expansion of government legislation which has increased the numbers of private business employees as well as government employees.
9. A final factor, important in contributing to the increase of office work and the number of office workers, is the lack of concern shown by businessmen towards office procedures, and the lack of adequate methods of controlling the amount of unnecessary office work.

Evidence of the rapid increase in the number of workers employed in the clerical occupations is obtained from a review of the Census reports for Canada and the United States of America for the twentieth century. The Census reports also record the emergence of the occupation of clerical worker generally, and the occupations of stenographer, typist, and clerk-typist specifically, as predominantly female occupations. Ostry (1967:3) states that in Canada the growth in importance of clerical workers is especially pronounced; the 1901 occupational pattern would have yielded just over 200,000 clerical workers by 1961, instead of the actual 819,000. She states that the striking advance of the white

collar sector in Canada after 1941 is "attributable to the proliferation of clerical occupations largely as a consequence of changes in the size and method of business operation and the expansion of government activities" (Ostry, 1967:11).

In 1901, there were 57,231 clerical workers in Canada, constituting 3.2 per cent of the total labour force (Ostry, 1967:50,52); in 1971, there were 1,373,560 clerical workers, constituting 15.9 per cent of the total labour force (Statistics Canada, 1971:Tables 3A-1,3A-7). The statistics for the United States record a similar trend. In 1910, there were 1,737,053 clerical workers, constituting 4.5 per cent of the total labour force (U.S. Bureau of the Census, 1910:53); in 1976, there were 15,507,000 clerical workers, constituting 17.9 per cent of the total labour force (U.S. Statistical Abstract, 1976:372). The Census reports also record the transformation of some of the white collar occupations, in particular the clerical group, from predominantly male to predominantly female occupations. In Canada, in 1901, male clerical workers accounted for 2.9 per cent of the total male labour force, and female clerical workers accounted for 5.3 per cent of the total female labour force (Ostry, 1967:50). By 1971, male clerical workers accounted for 7.6 per cent of the total male labour force, but female clerical workers accounted for 31.7 per cent of the total female work force (Statistics Canada, 1971:Tables 3A-1,3A-7). In the United States, in 1910, male clerical workers accounted for 3.8 per cent of the total male work force, and female clerical workers accounted for 7.3 per cent of the total female work force (U.S. Bureau of the Census, 1910:53). By 1976, male clerical workers accounted for 6.2 per cent of the total male work

force, but female clerical workers accounted for 35.3 per cent of the total female work force (U.S. Statistical Abstract, 1976:372). Thus, each decade clerical workers are accounting for an increasingly larger proportion of the total labour force, and female clerical workers are dominating the clerical occupations. Such changes in the composition of the labour force are important for occupational planning (Garbin and Echols, 1970:2).

Most clerical employees are involved with records at some time in their office career, be it classifying, storing, controlling, retrieving, or simply using. Students who are preparing for office careers should be made aware of the importance of records, and the possible extent of their involvement with them.

Unfortunately, there is a lack of current data on the filing practices of businesses which would permit curriculum developers and business educators to acquaint office education students with the various filing tasks performed in offices today, the range of office jobs which involve filing, and the proportion of the work day which could be devoted to filing.

The existing curriculum guides are based on what curriculum developers and business educators believe to be the filing practices of business and industrial enterprises. These practices may have or may be changing as a result of the sophisticated office equipment now available and the masses of data it can produce rapidly.

The present study sought to determine the filing practices of selected Edmonton business and industrial enterprises. The information obtained should assist business education curriculum developers in designing and evaluating the filing curriculum.

STATEMENT OF THE PURPOSE OF THE STUDY

One of the goals of the Business Education program in high schools in Alberta is to prepare students for jobs as they exist in the labour market. To achieve this goal, the instruction given in high school must be both vocational and relevant. To ensure that vocational instruction is relevant, those involved with curriculum development in Business Education should identify tasks performed on the job, and anticipated changes which will affect those tasks.

The present study of filing in selected Edmonton businesses attempts to identify the filing equipment, systems, supplies, personnel, tasks, and employment qualifications and training associated with filing, and to identify the anticipated changes which might affect filing in selected private (non-governmental) business and industrial enterprises in Edmonton. The study seeks answers to the following questions:

1. What types of filing equipment are in use?
2. What is the extent of use of each type of equipment?
3. What is the rank order of filing equipment according to the number of items stored or filed?
4. To what extent is filing equipment coordinated?
5. To what extent is filing equipment centralized?
6. Where is filing equipment located?
7. What is the frequency of use of filing equipment within each location?
8. What types of filing systems are in use?
9. What is the rank order of frequency of use of the filing systems?
10. In what form or forms are records retained?

11. Which filing system or systems are used to retain paper records?
12. Which filing system or systems are used to retain card records?
13. Which filing system or systems are used to retain non-paper records?
14. What type or types of filing equipment are used to retain paper records?
15. What type or types of filing equipment are used to retain card records?
16. What type or types of filing equipment are used to retain non-paper records?
17. What are the official job titles and the sex of employees who prepare microform records?
18. Do file clerks use microfilm and microfiche readers?
19. What method or methods of record retrieval are in use?
20. What is the frequency of use of the methods of record retrieval?
21. What types of filing supplies are in use?
22. How many employees perform filing tasks in each enterprise?
23. What proportion of the work day do employees spend performing filing tasks?
24. What is the sex of employees who perform filing tasks?
25. Which employees other than full-time and "part-time" file clerks have access to the files?
26. Who performs decision-making filing tasks, administrative or clerical employees?
27. Are decision-making filing tasks performed by males, females, or both?
28. What are the official job titles of employees who perform filing tasks?
29. What filing tasks do employees perform?
30. Do pre-employment qualifications exist for employees who perform filing tasks?

31. What formal and/or informal training is given to employees who perform filing tasks?
32. Who provides the training or assistance for employees who perform filing tasks?
33. Do written instructions on filing policies exist, and if they do, in what form?
34. Who should provide instruction in filing?
35. How much instruction should be given in high school?
36. What weaknesses exist in beginning employees who perform filing tasks?
37. Are any short-term changes anticipated that will affect the filing process and/or personnel?
38. Are any long-term changes anticipated that will affect the filing process and/or personnel?
39. Do types of filing equipment, and filing systems, filing supplies, filing personnel, filing tasks, employment qualifications and training, and anticipated changes differ in small, medium, and large enterprises?

DELIMITATIONS

The following delimitations apply to this study. The data appearing in the questionnaire refer only to filing equipment, systems, supplies, personnel, tasks, employment qualifications and training, and anticipated changes affecting filing in the building in which each questionnaire was completed. No attempt will be made to assess (a) the efficiency of the filing equipment in use, (b) the efficiency of the filing system or systems in use, (c) the competence of the employees engaged in filing, and (d) the training, if any, given to employees engaged in filing. Finally, it is not the purpose of the study to design a curriculum based on the information obtained. However, the information may be helpful to those involved with the development of the filing curriculum.

DESCRIPTION OF TERMS

Alphabetic name filing. A system in which records are arranged in dictionary order by the name of the person or organization.

Alpha-numeric filing. A system in which records are arranged using a combination of letters of the alphabet and numbers.

Business Procedures 20 and Office Procedures 30. These are two 5-credit courses offered in high schools in Alberta. In these courses students apply new and previously learned skills and knowledges which are basic to business and office operation.

Card filing equipment. Equipment used to store cards in one of the following types of card files: vertical, visible and rotary wheel.

Centralized filing. A method used to store records in a common location.

Charge-out. A form of notation is made indicating that records have been removed from the files.

Chronological filing. A system in which records are arranged in sequence, according to date, with the most recent date in front.

Coding. A process in which the record is marked with the caption under which it is to be stored.

Colour-coding. Different colours are used as a part of the method of classifying folders and guides.

Commercial system. A system which consists of ready-made guides and folders which are manufactured for immediate use. Such a system may include special features such as the colour-coding of folders and guides. It is usually marketed under a trade name.

Compressor. A movable support which expands or contracts the usable space within a file drawer.

Coordinated office system. In this study, the term means a group of storage units which can be utilized according to the needs of the office at a particular time.

Cross reference. A notation is made in a file which shows that the record is stored under another caption.

Date stamping. A notation is made on an incoming piece of correspondence to indicate the date, and often the hour, of receipt.

Decentralized filing. The records of each department or section of the enterprise are stored separately from the records of the other departments or sections.

Drawer cabinet. A container with one or more drawers which houses filed records.

File clerk, employee, or worker. In this study, these terms are used for an office employee who performs any file-related task. If the employee performs only file-related tasks, the employee is called a "full-time" file clerk; if the employee performs file-related tasks as part of the assigned office duties, the employee is called a "part-time" file clerk.

Filing. Records are classified, arranged, and stored so that they will be obtainable quickly when needed.

Filing equipment. Hardware such as drawers, shelves, or rotary wheels are used to store the records of the enterprise.

Filing manual. Printed instructions explain the filing procedures in use in the enterprise.

Filing system. Specific procedures are used to classify, arrange, and store records for fast accessibility when needed. All filing systems are based on the alphabetic or numeric principle, or their combination.

Folder. A folded cardboard container holds the records erect in the files.

Follow-up. The file clerk seeks borrowed records to bring about their return to the files.

Geographic filing. A system in which records are arranged alphabetically, first by location, and then by name.

Guide. A sheet of heavy cardboard with a tab guides the eye to the section desired in the file drawer or shelf, and also supports the records. Dividers perform the same functions as guides.

Hanging folder. Folders are suspended between a pair of steel rods mounted in the file drawer or shelf.

Indexing. The caption under which the paper is to be filed is determined.

Inspecting. The paper is checked for a release mark before indexing.

Label. A gummed or self-adhesive sticker on which the caption appears which is attached to the tab of the folder or guide.

Large, medium, and small business and industrial enterprises. An enterprise which employs 50 or more office employees (excluding supervisors and managers) is classified as large; an enterprise which employs from 10 to 49 office employees (excluding supervisors and managers) is classified as medium; an enterprise which employs from 1 to 9 office employees (excluding supervisors and managers) is classified as small.

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Lateral files. Side-by-side files combine the space-saving advantages of shelf files with the convenience of pull-out drawer cabinets.

Microfiche. Information is recorded in micro-miniature on a sheet of film which is approximately 15 cm by 10 cm. Up to 60 letter-size sheets of information can be stored on one microfiche.

Microfilm. Information is recorded in micro-miniature on negative film, thus reducing storage space by approximately 96 per cent.

Microfilm/microfiche reader. Apparatus, resembling a small television screen, is used to read information stored in microform. The machine enlarges the film to standard page size, and in some cases can produce a hard copy of the record.

Microform. A general term which covers any method of retaining information by photographing it in greatly reduced size on negative film.

Motorized filing equipment. Mechanical or electronic means are used to make the location of a record visible to the file clerk. The equipment can be called mechanized or power-driven.

Non-paper records. Computer cards, computer tapes, or microform are used to retain information in the enterprise.

Numeric filing. A system in which records are arranged according to numbered notations.

Phonetic filing. A system in which records are arranged by sound, not spelling.

Records. Information is retained by the enterprise in paper or non-paper form.

Records management. The planning, organizing, and controlling of the procedures used to create, protect, store, and dispose of records.

Releasing for filing. A notation is made that shows that a record has received the required attention and is ready for filing.

Reminder/tickler filing. A chronological system of filing is employed to ensure the recall of important items of business which must be deferred to a later date but must not be overlooked.

Rotary files. Cards are stored on wheels. The wheels are available in many sizes, from small desk-top wheels to large motorized wheels.

Shannon file. A sheet of flat pressed wood with a metal arch at the top which can be opened is used to file papers. Two holes are punched on each sheet of paper before it is placed on the arch.

Shelves. Units of shelves are used to store records vertically. Shelves without doors are called open shelves; those with doors are called closed shelves; shelves which slide on rails to permit two banks of shelves, one in front of the other, are called sliding shelves.

Sorting. Records are arranged in sequence to facilitate the filing process.

Subject filing. A system in which records relating to a specific subject or topic are filed in a common location, and within each subject subdivision, the records are arranged alphabetically by topic.

Tab. Guides and folders have a projection at the top on which the caption appears.

Vertical Filing. Records are stored on edge in the file drawer or shelf.

Visible card filing. Cards are stored horizontally in trays with the edge of each card overlapping.

Chapter II

FILING SYSTEMS, FILING EQUIPMENT, AND FILING SUPPLIES USED TO RETAIN RECORDS

The records or files of a business are the memory of that business and as such must be kept safely and orderly and must be available when required. Each business has to determine ~~which~~ records it wishes to retain, the length of retention time, the system or systems of retention including procedures, and the accompanying equipment and supplies.

RECORDS RETENTION

Records have been kept since commerce began. Even barter could not proceed beyond very slight and elementary stages without some definite method of recording transactions. Leahy and Cameron (1965:2) state that much of the history of civilization is to be found in the records of 5,000 years of business enterprise in selling, leasing, hiring, lending, and collecting. The clay tablets of ancient Babylon, Egyptian murals, dried skins, papyrus scrolls, and finally paper itself all bear evidence of man's reliance on record-keeping. Eventually the desirability of preserving and retaining orderly records became apparent. According to Griffin (1964:60), the first method used was the stringing of records on a thread. Indeed, the term file comes from the Latin term "filum" which means "thread."

Griffin (1964:60) reports that the first progressive development in filing--horizontal or flat, characterized by the placing of paper flat or horizontally in a drawer or box--appeared about 1870. Later, indexes

were added and the papers were filed in groups according to the first letter of the name. The vertical method of filing papers, characterized by the placing of records upright behind guides, was introduced at the World's Fair in 1892 (Griffin, 1964:60). Today, vertical filing is a generally accepted method of filing business records.

The convenience of consolidating papers pertaining to an individual, an organization, a specific locality, a subject, or a specific date soon became apparent. Here, respectively, are the beginnings of the alphabetic, geographic, subject, and chronological methods of filing. The numeric method was developed later.

Johnson (1958:66) states that World War II can claim major credit for improving and advancing the science of filing. The thousands of directives, production orders, and memos that accompanied and followed World War II necessitated new and improved filing methods. Recent innovations in office technology have resulted in new forms of record retention. Electronic data processing systems eliminate a considerable amount of paper records and hand filing; an increasing number of records are microfilmed; and systems of rapid information retrieval combining micro-filming with electronic equipment are used. These innovations facilitate automated information retrieval. Specifically, computers can store information internally on magnetic drums, magnetic cores, and magnetic disks; and externally, but connected with the computer, on magnetic-tape devices, and punched-card machines. The stored information can be retrieved when desired either as hard-copy records or as a display on a screen. In addition, the records may be transmitted from one computer to another and printed out at a remote location (Keeling, Kallaus, and Neuner, 1978:240).

Electro-optical scanning, developed in 1966 (Document Storage and Retrieval, n.d.:J), permits random filing and eliminates misfiling. Each folder in the file is given an identifying strip which permits scanning heads to locate the particular file identified on a push-button console, push the folder forward, and flash the location of the folder on the console. Another development is that of coded shelves which are used to store file bins. The bins are brought to the work station or returned to their file location via a transport mechanism activated by simple push-button instructions (Document Storage and Retrieval, n.d.:E).

Microform records, miniature film replicas of the original paper documents, permit 96 to 98 per cent savings in storage space. The common types of microform records, microfilm or microfiche, require special machines known as readers to magnify the miniature documents. In a microfilm system, special markers, referred to as targets, are placed at the beginning and end of each roll of film and the roll of film is stored in a labelled container. Microfiche cards have the title and code number printed at the top left-hand corner of the card and are stored in specially designed boxes.

One would expect that these technological advances would have a direct and profound impact on the methods of records retention in the business office. One of the purposes of this study was to determine the methods of records retention used in selected Edmonton businesses.

FILING SYSTEMS

A filing system may utilize alphabetic, numeric, alpha-numeric, and phonetic arrangements or one of the various commercial arrangements

designed and produced by manufacturers. However, alphabetic and numeric filing are assumed to be the two most used arrangements. In an alphabetic arrangement, records are classified according to the sequence of the letters in the alphabet, whereas in a numeric system, the records are classified according to the sequence of numbers. The two arrangements may be combined in an alpha-numeric system.

Irrespective of the filing system employed, good filing systems have the following basic requirements: the papers or records must be properly classified; the operation of the system must not be unduly complex; the papers must be easily filed and retrieved; and the system must be flexible enough to meet the filing needs of the business.

Regardless of the filing system in use, there are several basic preliminary steps to filing, the omission of one of which reduces the efficiency of the system. The seven basic steps are as follows:

1. Checking for release for filing. The item is approved for filing.
2. Inspecting and indexing. The caption under which the paper is to be filed is determined.
3. Coding. The record is marked with the caption under which it is to be stored.
4. Cross referencing. A notation is made in a file which shows that the record is stored under another caption.
5. Preparing necessary reminders. A notation is made in a file which states that the record should be brought forward on a later date.
6. Sorting. The records are arranged in sequence to facilitate the filing process.
7. Filing. The records are placed in storage.

Textbooks on filing recommend that a filing system should be accompanied by a set of written instructions to aid the filing personnel.

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It is generally agreed by authors of such textbooks that without written instructions, filing systems deteriorate with time, changes in personnel, and oral explanations. Written instructions are said to provide a permanent record of the way a filing system is organized and used; they are a teaching aid for new employees; they relieve any one person of being the authority; and they give permanence to the system. Written instructions can take the form of a filing manual, or a section in the company procedures manual. However, according to Johnson (1958:120) "the majority of businesses apparently have not yet seen the importance of preparing such a manual."

Systems Based on an Alphabetic Arrangement

Systems based on an alphabetic arrangement are said to be extensively used because the alphabet is widely known and easily applied in arranging named material. Alphabetic name, geographic, and subject filing are examples of such systems. Various commercially produced systems may also be included as examples.

Alphabetic name. In this system, records are arranged in dictionary order by name of person or organization. However, within individual file folders, correspondence is filed chronologically, with the most recent item being placed first. To standardize filing by name, rules have been established.

Geographic. In this system, records are arranged alphabetically, first by location and then by name. All records relating to a specific geographic location are filed together and, within each geographic subdivision, the records are filed alphabetically by name or organization.

Subject. In this system, records are arranged according to topics. All records relating to a specific subject are filed in a common location, and within each subject subdivision the records are filed alphabetically by topic.

Commercial. Commercial filing systems based on the alphabetic arrangement but with additional features have been produced by manufacturers to facilitate the filing and retrieval of records. One such system is "Variadex," which incorporates alphabetic filing with the colour coding of guide tabs and folder tabs. Folder tabs and guide tabs are colour coordinated thus facilitating the filing and finding process and minimizing the likelihood of misfiling.

Systems Based on a Numeric Arrangement

Records may be filed according to numbered notations. Such systems require a card index file, arranged alphabetically, showing either the name and address of the correspondent or the title of the records, and the assigned number under which the record is filed. Thus the card index provides the number necessary for locating a record. Bassett, Agnew, and Goodman (1967:126) state that the use of numbered notations on guide and folder tabs has increased in recent years and that the increase has undoubtedly been caused in part by the widespread use of mechanized office data processing. Punched cards are more easily processed by numbers, electronic computers operate through numbers and, increasingly, reference to information is achieved through the use of various numbering systems.

Well-known numeric systems are simple numeric filing, terminal digit filing, middle digit filing, decimal subject filing, filing by date, and reminder/tickler filing.

Simple numeric filing (consecutive). In this system, records are stored consecutively by number and, therefore, the expansion of files is unlimited. Examples of such records are bank cheques, invoices, and other pre-numbered records. This arrangement is not confined to pre-numbered records; numbers may be assigned to any records.

Terminal digit filing. As stated previously, in the simple numeric filing system records are added in consecutive order, and obviously the numbers become larger as growth occurs. Accordingly, the most recent and usually most active records are those with the highest numbers and, therefore, congestion usually occurs at the file cabinet or shelf. Also, as the number of records grows, the individual record number becomes larger, which contributes to errors in filing. To overcome these difficulties, terminal digit filing was developed. In this system, the records are filed according to the final group or series of digits, with the numbers read in groups from right to left. For example, the number 301765 would be arranged as 30 17 65 and the record carrying that number would be filed in drawer or shelf 65, according to the terminal digit. This dispersal of records eliminates congestion at the files, and reduces the incidence of misfiling resulting from carrying large numbers in memory when filing.

Middle digit filing. Middle digit filing is a modification of terminal digit filing. Instead of utilizing the group or series of

digits at the right as occurs in terminal digit filing, the middle group or series of digits is used. For example, 301765 would be divided 30 17 65 and the record carrying that number would be filed in drawer or shelf 17, according to the middle digit. The advantage is that all records with the same middle group or series of digits are filed in one location, and then according to numerical sequence as determined by the group or series of digits to the right. Thus, a group of 100 sequential records are kept together.

Decimal subject filing. In this system, files are arranged by subject but each subject is given a number which is used on the guide and folder tab. The decimal system of classification is based on not more than ten primary groups, each of which can be subdivided indefinitely. Each primary group is represented by three digits preceding the decimal point, as 000., 100., 200., etc., and each group correlates items having some common characteristics. The three digit prefix to the decimal point confines the primary classifications to simple numbers which are easy to remember. In addition to classifying the material into ten primary groups, each group can be expanded by moving from the general to the specific where needed. For example, if 700 were the primary classification of "Machinery and Vehicles," then the secondary classification might be 701 for "Steam Engines and Locomotives," 702 for "Boilers and Accessories," 703 for "Automobile Engines," etc. When the volume of material under the secondary classification requires further division, the decimal digit is used and expanded as in 703.1 for "6-cylinder," 703.2 for "8-cylinder." Likewise, secondary numbers may be extended indefinitely to make more detailed classifications.

A widely used decimal subject classification system is the Dewey Decimal system, used extensively in libraries. In this system, all knowledge is divided into ten broad subject classifications, and decimals are used to permit infinite flexibility.

Chronological filing by date. In chronological filing, records are stored in sequence according to date, with the order reversed, so that the most recent records take first position. Chronological filing is often used for such records as daily reports, deposit tickets, freight bills, statements, and order sheets. Obviously, this system is not suited to correspondence filing which requires the grouping of records relating to an individual or organization.

Reminder/tickler filing. A chronological system of filing is employed in follow-up systems such as "reminder" or "tickler" files. In offices, important items of business must be deferred to a later date but must not be overlooked. To ensure the recall of these items of business, a "follow-up" or "tickler" file, arranged according to date, is established. In the "follow-up" filing system, the record requiring attention on a future date is placed behind the guide in the file bearing that date, whereas in the "tickler" filing system a reminder is placed behind the guide in a card file bearing that date. The reminder is a note to pull from the regular file a certain record on a certain date.

Systems Based on an Alpha-Numeric Arrangement

A variation of the two basic systems is the alpha-numeric system of filing which combines alphabetic and numeric symbols. One example of an

alpha-numeric system commonly given in filing textbooks is the commercially produced "Direct Name" system.

In the "Direct Name" system, as in the alphabetic system, the name of the person or organization is indicated on the tab of the folder. In addition, a number is assigned to each folder and that number is indicated also on the folder tab. Several folders may have the same number; for example, all folders behind "Aa--Ag" might carry the number "1," and "Ah--Al" might carry the number "2." To find a folder, the employee identifies the name of the person or organization and searches for the folder behind the appropriate alphabetic guide; whereas to file a folder, the employee identifies the number on the folder and files the folder alphabetically behind the guide carrying that number. Hence, the motto of the "Direct Name" system is "Find by Name and File by Number" (Filing Instruction Course, n.d.:17).

Systems Based on a Phonetic Arrangement

Kahn, Yerian, and Stewart (1961:145) state that over 100,000 surnames can be spelled from 2 to 20 different ways and that names which sound alike, but are spelled differently, may be far apart in an alphabetic file. Examples of such surnames are Patin, Paton, Patten, and Patton. To overcome this difficulty of finding a record when the spelling of the name is not known, records can be arranged phonetically by grouping names which sound alike. According to filing textbooks, a popular phonetic filing system is commercially produced under the trade name "Soundex." The "Soundex" system brings together into one section of the files all names that sound alike, but may be spelled differently,

by assigning alpha-numeric codes based on pronunciation rather than on spelling. The first letter of the name is used to determine the main alphabetic section, the next three key letters (disregarding vowels) are given a number coded according to a chart, and the record is filed according to the assigned alpha-numeric code. For example, any spelling of "Patton" would be assigned the number P350 ("P" for "Patton," "3" for "t," "5," for "n," and "0" to satisfy the requirement of a three digit code) and would be filed behind the appropriate guide.

Other Systems

Although other filing systems may exist, they are a variation of the alphabetic, numeric, or alpha-numeric systems, perhaps incorporating special features such as the colour coding of guides, tabs, and folders to facilitate the filing and finding process. Usually these systems are produced commercially under a trade name.

FILING EQUIPMENT

A variety of filing equipment is commercially available to facilitate the tasks of filing personnel. Available are drawer filing cabinets, shelves, lateral file units, multi-purpose office storage equipment, card filing equipment, and motorized filing equipment. Filing equipment may be centralized, decentralized, or both centralized and decentralized with a major part of the equipment being in a central location, and the remainder dispersed throughout the building.

Drawer Filing Cabinets

Drawer filing cabinets may be used to store records vertically; that is, the records are placed on edge in the file drawer. Each

drawer of the filing cabinet is equipped with a compressor which permits expansion and contraction of the usable drawer space. Within the drawer, dividers may be placed at intervals to hold the filed material erect, and guides are inserted to indicate the various subsections.

Shelves

Equipment consisting of units of fixed shelves may be used to store records vertically. Units without doors are called open shelves, whereas those with doors are called closed shelves. Some units slide on rails to permit two banks of shelves, one in front of the other.

Because the depth of each shelf matches the length of the file folder, this type of equipment requires only 50 per cent of the total space required by drawer cabinets (Bassett, Agnew, and Goodman, 1967:137). The folders stand vertically and are held erect by sliding compressors and dividers.

Lateral File Units

Lateral filing equipment, first marketed in 1961 (Document Storage and Retrieval, n.d.:D), resembles shelf filing units by providing side-to-side rather than front-to-back filing, but each shelf pulls out like a drawer, thus combining the space-saving advantages of shelf filing with the convenience of pull-out drawer cabinets.

Multi-Purpose Office Storage Equipment

Drawer filing cabinets and shelf units may be replaced by multi-purpose storage equipment comprised of lateral shelves which permit customized interiors, and flexible office partitions and modular work centres.

Card Filing Equipment

Certain types of information are stored conveniently on cards which require specially designed storage equipment. Examples of this kind of equipment are card boxes which store cards vertically, visible card files which store cards horizontally in trays with the card edges overlapping, and rotary card wheels. Rotary wheels are available in many sizes, from small desk-top wheels to large motorized wheels. The classification and arrangement systems employed in card files are the same as those employed in storing other records.

Motorized Filing Equipment

Most filing equipment is of the stationary type which requires the file clerk to search manually for the desired location of a record or records. Motorized, mechanized, or power-driven filing equipment makes visible to the file clerk the location of records, thereby providing faster accessibility to those records.

Examples of motorized filing equipment are power-driven shelves, power-driven rotary wheels, and electronically controlled motorized file bins. Power-driven shelves, housed in a large cabinet, are a series of shelves which are mounted and moved in the same manner as an escalator. By pushing a button, any shelf may be rotated into position in front of the work station (Bassett, Agnew, and Goodman, 1967:176). Large, power-driven rotary wheels may be employed to rotate quantities of paper records which obviously facilitates filing. Electronically controlled motorized file bins can be extracted and restored using a transport mechanism which moves between facing banks of electro-optically coded shelving housing the file bins (Document Storage and Retrieval, n.d.:E).

FILING SUPPLIES

Filing supplies, necessary to permit the appropriate use of equipment, include standard folders, hanging folders, labels, guides, and compressors. These supplies are available in a variety of sizes and colours, and are generally produced by companies manufacturing filing equipment.

Standard Folders

Folders, available in different sizes and colours, are the retainers and protectors of the records. They are made of heavy cardboard folded so that all or a part of the back projects 1.25 cm or more above the front. The projection is called the tab.

Hanging Folders

Hanging or suspended folders, eliminating the need for compressors because they are suspended between a pair of steel rods mounted in the drawer or shelf, are constructed with metal strips across the front and back top edges of the folder. These metal strips project beyond the sides of the folder and fit over parallel rails that run on both sides of a file drawer or shelf. A plastic or metal tab, enclosing a small card on which is typed the folder caption, is attached to the top of the hanging folder.

Labels

Although the caption on the folder may be written directly on the tab of the folder, it is preferable to type the desired information on a gummed or self-adhesive label and to affix the label to the folder tab. Labels are available in a variety of colours.

Guides

Guides are sheets of heavy cardboard, with tabs, which perform two functions: first, they act as "signposts" to guide the eye quickly to the place desired in the file drawer or shelf; and second, they help to support the records contained in the file drawer or shelf. The titles printed or typed on the guide tabs are called captions or notations and indicate the subdivisions of the system. Dividers perform the same functions as guides.

Compressors

Compressors, movable supports that expand or contract the usable space within a file drawer or shelf, are used to keep file folders erect.

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Chapter III

REVIEW OF THE LITERATURE

According to Voyles (1971:48), Office Practice courses included in Business Education programs in high school are designed to serve as

culmination, termination, capstone or bridge-the-gap courses for improving skills already learned, learning new knowledges and skills, and integrating skills, knowledges, traits, and attitudes to help prepare for beginning employment in an office.

Filing is an office activity which is performed by the majority of office workers at some time in their office employment. Consequently, in many schools, instruction in filing is offered in Office Practice courses. To ensure that the filing instruction is relevant in such courses, the filing practices of business offices should be determined. Numerous surveys of office tasks have been conducted since 1924, and all have included filing as part of the study. However, few surveys in the United States of America and none in Canada have dealt exclusively with filing practices in offices.

In this chapter, the literature pertaining to filing practices in business offices and to filing instruction in schools is reviewed. Findings from selected Office Practice studies and findings from studies dealing exclusively with filing are reported. The first part of the chapter presents the findings relating to filing in business offices, and the second part of the chapter presents the findings relating to filing instruction in schools.

FILING IN BUSINESS OFFICES

Filing, a General Office Task

According to the literature, filing is an office task frequently performed by the majority of office employees. Both entry-level and senior office employees are required to file even though filing tasks are not included in the official job description. In a study which investigated the circumstances surrounding the employment of beginning office workers in Oklahoma City, Reed (1956) found that beginning employees were generally unaware of the fact that the assignments of office employees frequently extend beyond the description of the duties for which they were initially employed. In addition, Reed found that filing is one activity that entry-level office employees were frequently called upon to perform. However, not only entry-level employees perform filing tasks. Wagoner (1968) analyzed the duties and functions performed by secretaries and found that although filing is considered to be clerical work, almost all secretaries performed many filing duties. Frederickson (1978) conducted a task analysis of secretaries in Washington, D.C., and found that every duty, no matter how routine or trivial, was of consequence and was part of the secretary's job. Filing was a task performed by secretaries.

Task Analyses Studies

Task analyses have been conducted at intervals since 1924 and all have shown filing to be an office task frequently performed by the majority of office employees. In 1924, Charters and Whitley conducted a classic investigation to determine the duties performed by the secretary.

The researchers interviewed 125 secretaries and had 715 secretaries complete checklists. Charters and Whitley (Frame, 1971:182) found that in a frequency listing of 871 duties, retrieving materials from the files and filing letters were in the list of 25 tasks most frequently performed.

Potter, in 1944 (Miller, 1961:53), investigated the duties of clerical employees in five large New York offices of more than 500 employees to determine the tasks of clerical workers and the distribution of their working time. Potter found that typing and filing duties ranked first in importance.

Goodman (1960) felt that there was a lack of common job titles and job descriptions in business and industry and that each prospective employer seemed to require different duties for given positions. To assist in the preparation of office workers for office duties, Goodman compiled from research studies a list of the duties that office workers are expected to perform. He identified the following eleven filing duties: alphabetic, geographic, numeric, and subject filing; operating a card index file; using cross references; classifying materials; retrieving materials; preparing folders; using follow-up files; and transferring files (p. 170).

Miller (1961) reviewed office practice research and professional writings prior to 1951 for the purpose of synthesizing research findings and opinions pertaining to office practice instruction. In each of the 45 studies conducted prior to 1951, filing was included as one of the most frequently performed duties. It ranked third in frequency of performance after typewriting and stenographic duties (p. 54).

Berry (1963) sought to provide a basis for the improvement of pre-employment training by analyzing the compatibility of general office assignments with pre-employment training for general office work. To achieve her objective, Berry identified the duties and tasks performed by the general office worker, and analyzed the nature of the office practice course in the public secondary school in the United States of America. Data were obtained from selected business firms in the United States, selected public schools in Indiana, and from professional literature. Summarizing the general office job activities performed by the companies participating in the study, Berry found that in all of the fifty companies included in the study, filing tasks were performed (p. 44). She also found that the only activities performed by all the general office workers were filing, communicating orally, and recording and verifying (p. 147). Berry's findings indicated that filing was an essential area of learning for the prospective general office worker.

Malsbary (1968) conducted a study to produce a profile of beginning office workers in the state of Connecticut. He attempted to identify the job tasks, skills, knowledges, and understandings that beginning workers needed to know to perform their office tasks. The findings revealed that one of the top three tasks of beginning workers, when weighted by frequency and time spent doing the task, was the filing of correspondence and other records.

Wagoner (1968) sought to clarify the occupational role of top level secretaries in today's changing world of work by studying the duties and functions they performed. Respondents were asked to indicate the importance of 13 functions of the secretary and to indicate the frequency of

performance of 162 duties. Wagoner found that most secretaries performed many filing duties; over three quarters of the secretaries were expected to cull employers' files regularly, maintain confidential company files, transfer records periodically to storage files, keep a desk reference file, and maintain general office files (p. 6). Two important duties which were becoming increasingly the responsibility of the secretary were the setting up of filing systems and the handling of confidential employee records.

Perkins and Byrd (1970) identified office activities by clusters of tasks. The objective of the office clusters research project was to identify the major types of tasks actually performed in those occupations most likely to provide employment for substantial percentages of non-college bound youth. The study was based on the premise that accurate, up-to-date task data are needed by those who would change the Business Education curricula. The research was conducted in two phases, one in 1966 (Perkins and Byrd, 1966) and the other in 1968 (Perkins and others, 1968). Information was obtained by questionnaire from a comprehensive sample of office employees working in five sizes of offices in twelve standard industrial classifications in the state of Washington. The study identified 595 office tasks clustered within the following 13 major task categories: typewriting, operating office machines and equipment, taking dictation and transcribing, mailing, filing, telephoning and communicating, performing clerical operations, securing data, using mathematics, performing financial and record keeping operations, performing editorial operations, meeting and working with people, and miscellaneous. The following sixteen filing tasks were performed

by 50 per cent or more of the office workers in the sample (Perkins and Byrd, 1970:108):

<u>Filing Tasks</u>	<u>Percentage of Workers Performing Task</u>
Get materials from files	90
Sort materials for filing	84
Make folders and folder titles for files (labels)	77
Search for lost materials	75
Transfer records to inactive files	74
File materials by name of person	68
Revise files	68
File materials by topic or subject	65
Keep card indexes of various kinds	61
Handle classified or confidential files	61
File materials by number	60
Dispose of records	57
File materials by date	53
Select and/or order filing equipment and supplies	53
Control and manage filing system	53
Handle cross references	50

Bumanglag (1972) replicated on a smaller scale the Perkins and Byrd study by identifying clusters of office tasks performed by secretaries in Honolulu. Her results were remarkably similar to those achieved by Perkins and Byrd, which would "seemingly indicate that there exists a common core of tasks performed by stenographers and secretaries, whether they be employed in the state of Washington or Hawaii, over 2,000 miles away" (p. 131). Bumanglag found that the filing tasks performed by 40 per cent or more of the respondents were as follows (p. 133):

<u>Filing Tasks</u>	<u>Per Cent</u>
Get materials from files	94
Sort materials for filing	89
Make folders and folder titles for files (labels)	89
File materials by topic or subject	81
Handle classified or confidential files	81
Transfer records to inactive files	81
Handle cross references	78
File materials by name of person	72

<u>Filing Tasks</u>	<u>Per Cent</u>
Keep card indexes of various kinds	72
Revise files	72
Search for lost materials	67
Keep tickler or follow-up files of various kinds	64
File materials by date	61
Check out materials from files to employees	61
Control and manage filing system	61
Dispose of records	56
Select and/or order filing equipment and supplies	56
Keep clipping file (newspapers, magazine articles, etc.)	56
Follow-up released materials	50
File materials by number	42

Harley (1970) determined the duties, activities, and responsibilities of office workers involved with the management of records in selected businesses in Minneapolis, Minnesota. The most common records management jobs were those of general clerk, systems analyst, and records center clerk, whereas the most common records management activities were working with equipment and supplies, controlling active records, choosing classification systems for records, and controlling records retention.

Frame (1971) conducted a study to determine the relationships which existed between office tasks performed by first and second year office employees, and those performed by high school students enrolled in office education courses. The office employees included in the study were limited to former students who were enrolled in office education courses approved by the Arizona Department of Vocational Education during the 1966-67 and the 1967-68 school years, and who were employed in offices at the time of the study. The students included in the study were public school senior students engaged in office education courses approved by the Arizona State Department of Vocational Education during the 1968-69 school year. Separate questionnaires, designed for each group, were

completed by 166 office employees and by 448 students. Frame found that the following filing tasks were performed by first and second year office employees (p. 158-159):

Sorting materials for filing, and getting materials from files were performed by 80 per cent or more of the respondents.

Making folders and folder titles for folders (labels), filing materials by name of business, filing materials by number, and searching for lost materials were performed by 79 per cent to 60 per cent of the respondents.

Handling classified or confidential files, revising files, transferring records to inactive files, filing materials by date, keeping card indexes of various kinds, and filing materials by topic or subject were performed by 59 per cent to 40 per cent of the respondents.

Disposing of records, handling cross references, controlling and managing filing systems, checking out materials from files to employees, selecting and/or ordering filing equipment and supplies, keeping tickler or follow-up files of various kinds, following up release of materials, assigning file numbers, keeping clipping file (newspapers, magazine articles, etc.), filing materials by city, state, or region, and installing a filing system were performed by 39 per cent to 20 per cent of the respondents.

Keeping clipping book (any type), using microfilming equipment, filing materials by sound, using motorized filing equipment, and using magnetic filing equipment were performed by less than 20 per cent of the respondents.

Erickson (1971) conducted a study to identify and analyze those job components which could be considered basic to most beginning and intermediate levels of office work. In-depth interviews were conducted in the Los Angeles area with 300 office workers, 16 to 24 years of age, who had less than the baccalaureate degree; and with their supervisors. Erickson identified ten basic components of office work which comprised 5 per cent or more of the total job time. The components are presented in descending order of frequency of occurrence (p. 22):

<u>Basic Components of Office Work (5% or more of total job time)</u>	<u>Per Cent of 300 Jobs in which Component Occurred</u>
Communicating with others (interpersonal relations)	90
Sorting, filing, and retrieving	71
Typewriting	49
Checking, computing, and verifying	47
Collecting and distributing	21
Operating business machines (other than typewriter and ADP equipment)	18
Operating automated data processing equipment (ADP)	14
Taking dictation	10
Supervising, planning, and training	3
Analyzing procedures and flow charting	3

The filing component ranked second in frequency of occurrence.

MacPherson (1976) conducted an analysis of selected basic components used in office work by beginning clerical workers in the province of New Brunswick, Canada. The purpose of the study was to provide a basis for the improvement of the high school Business Education program by determining the characteristic activities, duties, knowledges, and skills required for beginning clerical workers in those job entry positions not requiring an education beyond high school. The respondents, 142 beginning clerical workers in New Brunswick, evaluated 229 tasks, grouped into 10 basic components, pertaining to clerical work. Six of the ten basic components occurred in nearly 90 per cent of the offices surveyed. The six basic components, with the percentage of jobs in which they occurred, were as follows: communicating with others (interpersonal relations) occurred in 98.6 per cent of the jobs; sorting, filing, and retrieving occurred in 95.1 per cent; checking, computing, and verifying occurred in 93 per cent; operating business machines occurred in 89.4 per cent; typewriting occurred in 88.7 per cent; and collecting and distributing occurred in 88 per cent (p. 87).

The filing component was second in frequency of occurrence in MacPherson's study, a finding identical to that obtained by Erickson (1971).

Seventy-eight of the 229 tasks evaluated in the study occurred in over 50 per cent of the jobs surveyed; 16 of these 78 tasks were in the sorting, filing and retrieving component. According to MacPherson, the 16 file-related tasks, listed in descending order of frequency of occurrence; were as follows (p. 82):

- Get materials from files
- File materials by name of person
- Scan for identity of content
- File materials by number
- Make folders and folder titles for files (labels)
- Stamp or note for identification
- Count or total
- Control and manage filing system
- Match (such as numbered items on a control sheet or log
with those on folder or document)
- Keep card indexes of various kinds
- File materials by topic or subject
- Search for lost materials
- Check out materials from files to employees
- Handle classified or confidential files
- Revise files
- Keep tickler or follow-up file of various kinds

The most common systems of filing in the offices surveyed were, in descending order, filing by name of person; by number; by date; and by city, province, or region (p. 82).

King, Lee, and Oliver (1978) conducted a task analysis study as a foundation for the development of career-relevant instruction for secretarial, stenographic, typing, and related occupations. A sample of 576 clerical workers from private enterprise and governmental agencies in Virginia was given a task list consisting of 543 items. Included among the 10 most frequently performed tasks were preparing file folders and labels, filing records, and retrieving materials or information from files (p. 35).

Frederickson (1978) conducted in 1975 an analysis of the tasks performed by 120 secretaries employed in government and government-related agencies in Washington, D.C. The purpose of the study was to analyze those tasks most frequently performed by upper-level secretaries in government and government-related agencies and to consider the implications of these findings for the two and four year degree programs offered in the Department of Office Administration, Ferris State College, Big Rapids, Michigan. The results of the task inventory revealed that maintaining files was performed by approximately 80 per cent of the secretaries.

Follow-Up Studies

Follow-up studies which determine the tasks performed by recent graduates are frequently conducted by educational institutions for the purpose of maintaining relevance in the curriculum.

Cloyd (1964) conducted a follow-up study of business education graduates in Michigan to determine the tasks performed by beginning employees. She found that filing was performed by 40 per cent of the graduates in their office occupations.

Hays (1968) conducted a follow-up study of 89 employed office practice graduates of 1962 to 1966 from Kaneland High School, Illinois, as a basis for evaluating the effectiveness of the office practice course. The findings showed that typewriting and filing were the most common activities performed.

Pura (1970) conducted a study in Edmonton, Alberta, to determine the relative amounts of time spent performing various business and office activities by 30 randomly selected beginning office workers who were

recent graduates of the Office Practice course offered by an Edmonton high school. A questionnaire based on the list of action verbs from Nobels' 1968 taxonomy of office activities for business and office education was constructed to obtain the desired information. The questionnaire utilized the taxonomy's 20 primary division verbs of the operating, interacting, and managing domains, and the corresponding 20 groups of secondary division verbs. The list of employees' activities in the operating domain, ranked according to time spent, were as follows (p. 50-51):

recording--copy, write, duplicate, register, post, transcribe
 arranging--sort, and compile
 verifying--proofread, and check
 transmitting--forward, deliver, dispatch, distribute, and route
 manipulating--stamp, feed, numbering, and punch
 storing--file
 indexing--label, cross-reference, and code
 collecting--search, gather, and order
 composing--edit, document, and outline
 comparing--match
 modifying--correct, revise, and perfect
 calculating--total, count, and compute
 purging--weed

Thus, in the operating domain, the file-related task of arranging was ranked as second, of storing was ranked as sixth, of indexing was ranked as seventh, and of purging was ranked as thirteenth, according to time spent.

In 1977, the Edmonton Regional Office of Alberta Education (Alberta Education, 1978) conducted a follow-up survey of 417 high school short-hand students who had graduated in the years 1974 to 1975, and 1975 to 1976. An analysis of the findings of the survey revealed that filing was the fifth most frequently used business skill, following the skills of typewriting, spelling, following directions, and listening. Filing

skills were used "often" by 62 per cent of the respondents, "sometimes" by 23 per cent of the respondents, and "seldom" by 15 per cent (p. 11).

Stutsman (1974) conducted a follow-up study of 150 graduates from the Records Management course offered at Bowling Green State University, Ohio, to determine the adequacy of the records management course. Stutsman found that 85 per cent of the respondents were actively involved with the records of their company or organization, 73 per cent were required to set up filing systems, and 95 per cent used files for storing and retrieving papers. Stutsman also found that other records management responsibilities of the graduates, including the percentage of those involved, were as follows (p. 263):

	<u>Per cent</u>
Creation of records	93
Transfer of records to storage	70
Follow retention schedules	58
Work in inactive storage areas	43
Work with vital records	38
Work with microfilm	20
Use mechanized equipment	8

The foregoing review of the findings of the task analyses and follow-up studies from 1924 to the present time supports the statement that filing is an office task performed by the majority of office employees.

FILING INSTRUCTION IN SCHOOLS

The professional literature reveals the concern of business educators about the relevance of the vocational business education program in general, and the office practice course in particular. Farmer (1967:86) states that there is a need to investigate vocational courses with a view to improving their relevance to job requirements, and Voyles (1971:53) states that there is a need for more research on course content.

Miller (1961), after conducting her comprehensive study on the findings of research in office practice prior to 1951, reported the following:

Current practices in the selection of content for office practice courses revealed that teachers' choices of subject matters were influenced by one or more of the following: courses of study, suggestions by other teachers, suggestions by businessmen, or textbooks. The subject matter selected, however, was probably more valid when the nature of office jobs in the community was known (p. 75).

As stated previously, studies have been conducted to determine the tasks that beginning office employees are called upon to perform. Many of the studies recommend that filing instruction be given in school.

The Need for Filing Instruction

In the selected Indiana public schools included in her study, Berry (1963) found that filing instruction was predominantly a unit in alphabetic filing, including an acquaintanceship with other methods of filing; that normally five to six weeks were spent by the teacher on filing; that generally filing practice sets were used as instructional aids; and that a specified minimum level of skill was attained. The finding that routine filing activities were performed within each of the nineteen general office jobs included in the study led Berry to recommend that the office practice course should include filing instruction, but at an acquaintanceship level of learning, not a skill level of learning (p. 214).

In a study to identify the job tasks, the skills, and the knowledges and understandings that beginning workers need, Malsbary (1968) found that filing of correspondence and other records was one of the top three tasks that beginning office workers had to perform and know how to perform.

Harley (1970) gathered the opinions of office managers in Minneapolis relating to records management instruction at the secondary and post-secondary levels. The office managers indicated that records management instruction should be offered in high school. One half of the office managers reported that filing should be stressed and more than one third reported that micro-filming, records storage, reproduction, photography, records inventory, data processing, and correspondence control should be stressed.

Frame (1971) conducted a study to determine whether high school students enrolled in vocational office education courses in Arizona actually performed the tasks common to the occupations for which they were preparing. He found that a large number of office tasks were "commonly performed" by first and second year office employees, but "not commonly performed" by high school students enrolled in vocational office education courses. Relatively few office education students were required to perform the following tasks which were "commonly performed" by office employees: mailing, filing, using the telephone, communicating, clerical, and meeting and working with people (p. 365). Frame recommended that high school students enrolled in vocational office courses should perform office tasks which are commonly performed by first and second year office employees (p. 369). Thus, he advocated filing instruction in high school.

Bumanglag (1972) concluded in a study which identified the clusters of office tasks performed by secretaries in Honolulu that there were certain instructional areas basic to the preparation of prospective stenographers and secretaries. Records management, including filing, was one such area (p. 137).

Stutsman (1974) conducted a follow-up study of 150 records management students who had been out of school from one to four years. Stutsman concluded that good instruction in the basic principles of filing and finding of records was essential in high school to prepare students for office careers. In addition, an introduction to the more advanced principles of records management would be beneficial (p. 263).

MacPherson (1976) analyzed selected basic components of office work performed by 142 beginning clerical workers in New Brunswick. He found that one of the six basic components occurring in approximately 90 per cent of the offices surveyed consisted of sorting, filing, and retrieving. As a result of his findings, MacPherson recommended that the theory and practice of sorting, filing, and retrieving receive renewed emphasis in the curriculum, and that particular attention be given to the alphabetic system of filing (p. 92).

Instructional Materials

Johnson (1958) conducted a study to determine if the practice filing materials currently used in colleges in the United States were "business founded or the result of the author's whim" (p. 19). Specifically, her study attempted to reveal the adequacies and weaknesses of the filing practice sets of materials currently used to teach alphabetic filing in 230 colleges in the United States having membership in the National Association of Business Teacher Training Institutions. The assumption was made that educators want to use the very best materials that can be found to assist them in training students to perform filing tasks in offices. Johnson determined that six different filing practice sets were then in use. Copies of 58 sets of written instructions for filing

personnel were obtained from business to determine whether or not the rules used in the teaching of alphabetic filing were consistent with those used in business (p. 41). Because of the relatively small number of manuals or written instructions used in business, Johnson concluded that a great number of firms did not use any written method of filing instruction (p. 43, 120). As a result of her comparison between filing rules and practices of business and those appearing in the practice sets used in schools, Johnson recommended that a new practice filing set should be produced to surmount the inadequacies appearing in the existing practice sets.

Skinner (1973) conducted a study to compare the instructional materials in two textbooks commonly used for high school filing instruction in thirteen high schools in Berrien County, Michigan, with the perceptions of the office practice teachers in those high schools, and of records supervisors in sixty-seven companies ranging in size from eleven to five thousand employees in the adjacent Benton Harbour-St. Joseph, Michigan area. She sought to analyze the relationship between the instructional emphasis of the two textbooks and their relation to the filing procedures in the business office. Skinner conducted her study because she found that much of the research related to filing was concerned with office tasks and the business curricula generally, with only a cursory review of filing tasks, and she felt that current information was required to ensure that filing instruction would be realistic and relevant (p. 17). She obtained the following rank order list of the tasks performed by file clerks in the offices included in the study (p. 49):

1. Doing alphabetic filing
2. Retaining records; using tabs; using gummed labels
3. Using manila folders
4. Using adhesive labels
5. Using hanging folders
6. Transferring records; reading correspondence; using forms and guides
7. Doing numeric filing
8. Doing subject filing
9. Date and time stamping; using visible card files
- 10. Follow-up files
11. Using sliding shelf files
12. Protecting records
13. Coding correspondence for filing
14. Using open shelf filing
15. Using vertical and roll files
16. Doing alpha-numeric filing; releasing information for filing
17. Using charge out slips
18. Using a commercial filing system
19. Using requisition slips
20. Doing geographic filing; using rotary files
21. Microfilming documents
22. Using power-driven equipment

Skinner also determined the duties of file clerks other than filing (p. 50):

Typing
 Microfilming
 Sorting and opening mail
 Using copying machine
 General office assistant
 Bookkeeping
 General secretarial duties
 Answering the telephone
 Receptionist
 Invoicing
 Summarizing the cost of jobs
 All other office duties

That the size of the company did not affect the centralization or decentralization of filing equipment, that more companies had an alphabetic filing system than any other filing system, and that geographic, numeric, and subject filing were the filing systems in least use in the companies included in the study were also determined (p. 91, 92).

In the high schools included in the study, filing instruction ranged from 10 to 45 hours of class time and was taught in grades 10, 11, and 12.

From the data obtained, Skinner concluded that the records supervisors and office practice teachers were in agreement on a number of points relating to the filing process and instructional methods, and were in disagreement as to the importance of teaching subject filing, geographic filing, numeric filing, tabs, requisitions, file labels, charge out, release, date, and time stamping, and coding. Because of the disagreement regarding the importance or unimportance of teaching certain filing tasks, Skinner recommended that office education teachers conduct task analyses to determine those filing tasks performed by office employees in their specific employment area, and use this information to revise the curriculum (p. 17).

Implications of Changes in Office Technology

Preparing students for the world of work requires that the course content of vocational courses be updated constantly to keep abreast of technological changes affecting jobs.

Continuing the research conducted by Miller for the years prior to 1951, Prewitt (1961) analyzed, classified, and synthesized research findings of studies conducted from 1951 to 1959 in the area of office practice. Prewitt stated that office practice has increased steadily over the years both in the number of courses and in the variety of content, and that the influence of modern science and technology has created many new office duties and new methods of performing traditional office duties. Accordingly, revisions and changes in the office practice curriculum are required (p. 1). Prewitt stated that there is general

agreement among business educators that automation in the office will have its greatest effect on general clerical jobs. Automated machines which are designed to typewrite, compute, assemble, check, file, and find simultaneously will take over the highly repetitive aspects of clerical jobs which lend themselves to mechanization (p. 110). Specifically relating to filing, Prewitt concluded that there will always be information to be filed, but the methods of filing will be changed. The following quotation from the National Records Management Association appears in her study:

Automation in the office will increase the need for record-keeping. Filing systems, however, will be changed. In the automated process, the placement of large quantities of information on punched cards, paper or electronic tape, and permanent magnetic memory drums implies new materials and teaching methods in filing instruction which are not currently being used in office practice courses. File clerks will be replaced by tape librarians who will need to know how to file new materials in a different way. Some of the questions pertaining to filing which are asked constantly by business educators are as follows: (a) How will information be filed? (b) How will it be found? and (c) How will different information placed on a 15-foot piece of tape, for example, be distributed among different people who wish to use various parts of the information at the same time? (p. 111-112)

Prewitt stated that her study did not attempt to answer the questions listed in the foregoing quotation, but she concluded that office practice teachers should assess with extreme care the implications of automation on the office practice instructional program. Teaching procedures, content, and course offerings should be revised accordingly (p. 113).

Likewise, Berry (1963) found that the area most influenced by mechanization and automation within the office is that which involves routine clerical work. In her study, filing was one of the three activities performed by all general office workers (p. 147). Berry stated that there is a need for office workers who are better informed

and who are trained in the understanding of the whole procedure rather than a part of the process (p. 3).

Lambrecht (1976), writing about the historical development of office education, recorded a clear message from industry and from leaders in Business Education that technology would continue to offer both new content areas for instruction and would cause office education teachers to re-examine their traditional course objectives. She stated that office files have been subject to automation and have become more sophisticated. According to Lambrecht, microfiche, microfilm, aperture cards, and film clips are all parts of retrieval systems that can best be mastered on the job. Although Lambrecht states that certain business educators, such as Agnew, have expressed the belief that only alphabetic systems justify actual practice in schools (Lambrecht, 1976:82), other business educators such as Moskovis (1970) and Brandenburg (Nisbet, 1970) have stated that students must be taught integrated information systems. It is their opinion that filing can no longer be taught as the alphabetizing of pieces of paper and the placing of items in a file cabinet.

Need for Research

The review of the literature reveals that researchers, educators, and businessmen are in agreement on the need for continuous research in the field of vocational Business Education to ensure that the curriculum is relevant and that students are prepared to perform the jobs that exist in the local employment community.

A 1965 conference in California (Selected Entry Jobs, 1965) discussed the present and future opportunities for high school students in office occupations and reviewed the entry requirements for office

jobs for high school students. The conference findings stated that it was essential that all curriculum planning in vocational education involved the direct and continuous assistance of employers, that no longer was it possible to design occupational training programs in isolation from the needs of the future as projected by actual employment trends, and that occupational training must be based upon the performance required in the actual job (p. 3).

Erickson (1970) stated that the major goal of any vocational program is to equip students for successful employment. To reach that goal, the occupational area has to be analyzed to determine the skills, knowledges, and attitudes required of the worker (p. 208). The office education curriculum must be relevant to the world of work and changing occupational requirements, and must be aimed at the heart of entry-level office jobs (p. 208). Erickson believes that the fundamental question to ask of an office education program is:

Did the program provide the type of education and develop the marketable skills which are needed by the student in securing an office job and making satisfactory progress on that job? (p. 217)

To ensure that the goals of the program are achieved, Erickson states that continuous research should be "an integral part of the office education program" (p. 217).

Much support is given to the concept of keeping the office education program current by conducting surveys to determine local employing community needs, and the office tasks performed by employees in those offices.

Miller (1961) supported the investigation of employment in the local community as a valid procedure for selecting subject matter or

content in office education courses, and advocated that this procedure be substituted for the then current practices of selecting content from courses of study, suggestions by other teachers, and suggestions by businessmen or textbooks (p. 75).

Berry (1963:214) stated that office practice instruction should be modified according to the local employing community.

Frame (1971) recommended that high school students enrolled in office education courses should perform the office tasks which are commonly performed by first year and second year office employees. Recurring findings in Frame's review of the related research and professional literature from 1924 to 1971 were that inadequate and/or inappropriate preparation of high school youth for office employment had been and still is a critical problem; and that changes in society have created need for those involved in the development of high school office education curricula to continually reassess the office tasks performed in employing communities and to realistically and meaningfully include those tasks in high school office education curricula (p. 69).

Skinner (1973:17) advocated that for the purpose of updating course content, office education teachers should determine by task analysis those file tasks performed by office workers in their specific employment area.

Crooks (1977:44) stated that too many training programs lack modern equipment, up-to-date texts, and a knowledge of the tremendous changes that business offices have undergone in methods, formats, and skill requirements, particularly in the field of automation. She

urged business educators to get in touch with the employer community to find out what they need, and then, to meet that requirement.

There appears to be a real need for a study of the type conducted by the present researcher. Although some research has been carried out in the area of filing, many questions have been left unanswered, and those questions answered are not necessarily relevant today, or in the Edmonton area.

The Research Projects Committee of the Delta Pi Epsilon (1972:9) listed as needed research in Business Education the study and comparison of records management systems used in business for the purpose of determining implications for business courses.

Johnson's study (1958:283) stated that answers were needed to the following questions: to what extent are filing and records management duties a part of the office worker's job?; and how do offices train their file personnel, or do they? Prewitt (1961:111) stated that her study did not answer such questions as "How will information be filed?"; or "How will it be found?" Perkins and Byrd (1970:106) stated that their data regarding the clusters of tasks performed by office employees may be used as a partial basis for the re-evaluation of secondary school curricula, but the data has limitations. Their data show only the percentage of workers performing a task; the data do not provide information about the relative importance of each task, the frequency of performance of each task, the portions of worker time used for the performance of each task, or the types of knowledges, attitudes, or skills required for the successful performance of each task. Moskovis and De Young (1974:231) stated that to know that office workers file, communicate, use various calculating machines, et cetera does not

particularly help the classroom teacher. What is required is a careful analysis of these tasks, and this information should be available to the classroom teacher.

Most of the studies reviewed stated that filing was an office task performed by many office employees and, therefore, filing instruction should be offered in high school. Few of the researchers asked employers to state their opinions regarding the preparation of employees who will perform filing tasks. Berry (1963:52) found that over 90 per cent of the employers included in her study felt that through inservice training filing could be learned wholly during employment.

The present study attempts to provide information which will assist curriculum developers to determine if revisions are required in the filing curriculum.

SUMMARY

The foregoing review of the literature reveals the need for continuing research in the area of vocational Business Education if high schools are to prepare students for employment. To ensure that high school graduates are able to obtain employment in their local community and are able to function effectively in the work force, the tasks performed in school must be the same as the tasks performed on the job. Conducting a task analysis to determine those tasks performed by office employees in a specific community is the method recommended by most researchers to obtain current, local information which can be used to update the Office Procedures curriculum.

Many surveys of office tasks have been conducted since 1924 and all have included filing as a part of the study. The findings of these studies indicate that filing is an office task frequently performed by both entry-level and senior office employees. Most of the researchers recommend that filing instruction be offered in high school; and to ensure that the filing curriculum is relevant, the researchers encourage business educators to conduct task analyses to determine the filing practices of offices in the local employing community.

Unfortunately, few studies in the United States and none in Canada have dealt exclusively with filing practices in offices. As a result, curriculum developers and business educators lack current information on the filing practices of businesses, even though such information is essential if the filing instruction offered in high school is to prepare students for office employment.

The present study is an attempt to provide curriculum developers and business educators in the Edmonton area with current information on the filing equipment, systems, supplies, tasks, personnel, and anticipated changes which will affect filing in selected private (non-governmental) business and industrial enterprises in Edmonton, Alberta.

Chapter IV

DESIGN OF THE STUDY

Chapter IV describes the population and sample, the instrument, and the collection and treatment of the data.

POPULATION AND SAMPLE

The population of the study consisted of the business and industrial enterprises holding membership in the Administrative Management Society of Edmonton during the 1977-78 membership year. One enterprise was excluded from the population because its extraordinary size, structure, and decentralized organization made the collection of the data impossible. Using the number of office employees as a basis for determining size, the researcher classified the business and industrial enterprises as small, medium, and large. The assumption was made that the number of office employees in an enterprise is an indication of the volume of paperwork handled by that enterprise, and that the volume of paperwork influences the filing practices of the enterprise.

The enterprises having one to nine office employees (excluding supervisors and managers) were designated as small; the enterprises having ten to forty-nine office employees (excluding supervisors and managers) were designated as medium; and the enterprises having fifty or more office employees (excluding supervisors and managers) were designated as large. Five enterprises were randomly selected from the category classified as small; five were randomly selected from the category classified as

medium; and five were randomly selected from the category classified as large. In the large category, a substitute was selected randomly to replace an enterprise whose employees were on an extended strike. The fifteen enterprises comprised the sample to which the questionnaire was administered.

THE INSTRUMENT

The instrument used to collect the desired information was a questionnaire developed by the researcher. Readings in related research and literature pertaining to filing practices, changes in office technology that might affect filing practices, and speculation by the researcher provided the background for the questions used in the instrument.

The instrument sought to identify the filing equipment, systems, supplies, tasks, and personnel associated with filing, and to identify the anticipated changes in the enterprise which might affect filing. Specifically, the questionnaire sought to determine the following: the types of filing equipment in use, the extent of centralization of filing equipment, the location of filing equipment, the types of filing systems in use, the forms in which records are retained, the methods of retrieving information, the types of supplies, the number of full-time and "part-time" (i.e. employees who performed filing tasks as part of the assigned work duties) employees engaged in filing, and the personnel responsible for records management decisions. In addition, the study sought to determine the sex, the occupational titles, the percentage of the employees' work day devoted to filing, the tasks included in filing,

the training of employees, and the changes in the enterprise that might affect filing.

To validate the instrument, the questionnaire was submitted to three experts in filing who hold management positions in their respective enterprises in Edmonton. These three experts, selected from small, medium, and large enterprises not included in the population, comprised the group that participated in the pilot study which was conducted in March, 1978, to serve as a basis for refining the original questionnaire. The final instrument appears on pages 161 to 184 of the Appendix.

COLLECTION AND TREATMENT OF THE DATA

Within the period May 1, 1978, to July 14, 1978, the questionnaire used to obtain the data was submitted personally by the researcher to the employee in charge of filing in each of the fifteen enterprises; and an interview procedure was used by the researcher to complete the questionnaire. To verify the accuracy of the data appearing on the questionnaire, the interview was recorded on tape.

The data collected were tabulated and summarized in terms of frequencies and percentages (rounded to the nearest whole number), and comparisons were made among the three sizes of enterprises.

The analysis of the data, the findings, and conclusions are presented in Chapter V.

CHAPTER V

FINDINGS AND CONCLUSIONS

This chapter presents a summary of the data obtained from the questionnaire, an analysis of the data, the findings, and conclusions. To permit comparisons, the data are grouped by size of company; and to facilitate presentation of the data, each company is identified and coded by a letter of the alphabet. The five small companies are coded as A, B, C, D, and E; the five medium companies are coded as F, G, H, I, and J; and the five large companies are coded as K, L, M, N, and O. The questions are condensed and are grouped under the headings appearing in the questionnaire (Appendix, p. 161) namely, filing equipment, filing systems, filing supplies, filing personnel, filing tasks, employment qualifications, and anticipated short-term and long-term changes:

Filing Equipment: Questions 1, 2, and 3

Question 1 attempted to determine the filing equipment in use, the extent of use, and the ranking of the equipment according to the number of items stored. The data collected are recorded in Tables 1, 2, and 3.

The equipment in use by size of company is summarized in Table 1. An analysis of the data indicates that drawer filing cabinets were the only type of equipment used by all the companies included in the study; lateral files were used by 73 per cent of the companies; and both shelves

Table 1

Types of Filing Equipment in Use by Size of Company

Filing Equipment	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5		
	No.	No.	No.	No.	% *
Drawer Cabinets	5	5	5	15	100
Shelves	2	4	4	10	67
Sliding shelves	1	2	1	4	27
Lateral files	3	4	4	11	73
Card files	3	4	3	10	67
Visible card files	-	3	2	5	33
Rotary files	1	1	1	3	20
Motorized files	-	-	-	-	-
Other					
Binders	1	-	-	1	7
Open bins	1	-	-	1	7
Shannon files	-	1	-	1	7
Vertical plan files	-	-	1	1	7
Horizontal plan files	-	-	1	1	7
Microfiche boxes	-	-	2	2	13
Pamphlet boxes	-	-	1	1	7

* In this and subsequent tables, percentages are rounded to the nearest whole number.

and card files were used by 67 per cent of the companies. Sliding shelves were not as prevalent as fixed shelves; nevertheless, all four companies using sliding shelves also used fixed shelves. No company included in the study used motorized filing equipment. Special equipment for microfiche cards was the only type of equipment listed in the category "other" which was found in more than one company.

An analysis of the data in Table 1 reveals no noteworthy differences in the types of equipment used by size of company. The only type of equipment not used by all sizes of company was visible card files; this type of equipment was not found in small companies. Large companies indicated more items of equipment in the category "other" than did small and medium companies.

The extent of use of filing equipment by size of company is summarized in Table 2. An analysis of the data indicates that drawer cabinets were used very frequently by 93 per cent of the companies, lateral files were used very frequently by 47 per cent of the companies, and card files by 33 per cent. Shelves, though found in 67 per cent of the companies, were used very frequently by only 13 per cent of the companies. Although binders, open bins, shannon files, vertical plan files, and horizontal plan files, identified in the category "other," were each used by only one company, these items of equipment were used very frequently. When the two response categories of "very frequent" and "frequent" were combined, the most used types of equipment were drawer cabinets and lateral files. All the companies included drawer cabinets in these two response categories, and 67 per cent of the companies included lateral files.

Table 2
Extent of Use of Filing Equipment by Size of Company

Filing Equipment	Extent of Use by Size of Company															
	Very Frequent				Frequent				Moderate				Occasional			
	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Drawer cabinets	5	5	4	14	93	-	-	1	1	7	-	-	-	-	-	-
Shelves	-	1	1	2	13	1	1	1	3	20	-	2	13	1	2	3
Sliding shelves	1	-	-	1	7	-	-	-	-	-	-	-	-	-	1	1
Lateral files	2	2	3	7	47	-	2	1	3	20	-	2	13	1	-	1
Card files	2	1	2	5	33	-	1	-	1	7	1	3	20	-	-	1
Visible card files	-	-	-	-	-	-	2	-	2	13	-	2	13	-	-	1
Rotary files	-	-	-	-	-	-	1	-	1	7	1	2	13	-	-	1
Motorized files	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Binders	1	-	-	1	7	-	-	-	-	-	-	-	-	-	-	-
Open bins	1	-	-	1	7	-	-	-	-	-	-	-	-	-	-	-
Shannon files	-	1	-	1	7	-	-	-	-	-	-	-	-	-	-	-
Vertical plan files	-	-	1	1	7	-	-	-	-	-	-	-	-	-	-	-
Horizontal plan files	-	-	1	1	7	-	-	-	-	-	-	-	-	-	-	-
Microfiche boxes	-	-	-	-	-	-	-	1	1	7	-	1	7	-	-	-
Pamphlet boxes	-	-	-	-	-	-	-	1	1	7	-	-	-	-	-	-

An analysis of the data in Table 2 reveals no considerable difference in the extent of use of filing equipment by size of company.

The filing equipment ranked by each company according to the number of items stored is summarized in Table 3. It is obvious from an examination of the data in Table 3 that in some companies certain items of filing equipment received equal ranking. Drawer cabinets were ranked first by 93 per cent of the companies, and second by the remaining 7 per cent of the companies. Lateral files were ranked first by 33 per cent of the companies, and either first or second by 67 per cent of the companies. Shelves were ranked first by only 7 per cent of the companies, but first or second by 47 per cent of the companies. Shannon files were the only type of equipment listed in the category "other" given first rank.

It may be concluded that drawer cabinets, lateral files, and shelves were the three types of equipment in greatest use in the companies involved in the study. Drawer cabinets, the traditional type of filing equipment, were the only type of equipment found in all the companies, and they had the greatest frequency of use and the highest rank by number of items stored. Lateral files were next in frequency of use and rank, followed by shelves. An analysis of the data by size of company indicates that no small company used visible card files. Large companies listed more items of equipment in the category "other" than did small and medium companies.

Question 2 attempted to determine the extent of coordination of the filing equipment. Table 4, which summarizes the data, reveals

Table 3

Filing Equipment Ranked by Number of Items Stored

Filing Equipment	Rank Order by Number of Items Stored														
	Small Companies					Medium Companies					Large Companies				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Drawer cabinets	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
Shelves	2				2	4		1	2	3		2	2	4	2
Sliding shelves	1								4	4			3		
Lateral files	1	1	2			3	2	1		2	1	2	1	2	
Card files	1			2	3	2		3	5	6		3	2		1
Visible card files								2	3	5		5			3
Rotary files			2					3					3		
Motorized files															
Other															
Binders			2												
Open bins			2												
Shannon files										1					
Vertical plan files												2			
Horizontal plan files												2			
Microfiche boxes												3		3	
Pamphlet boxes												4			

Table 4
Extent of Coordination of Filing Equipment by Size of Company

Filing Equipment	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
Uncoordinated	5	5	5	15	100
Coordinated system	-	-	-	-	-
Combination of the above	-	-	-	-	-

that filing equipment was comprised of uncoordinated units in all the companies included in the study. Thus, although the literature discusses the new concept of a coordinated office system in which all the hardware is comprised of coordinated components which can be adapted to the needs of the office at any particular time, this concept does not appear to have been applied in the offices included in the study where, apparently, filing equipment is uncoordinated and purchased at intervals when required.

The purpose of question 3 was to determine the extent of centralization and the location of filing equipment. The data collected are recorded in Tables 5, 6, and 7.

The extent of the centralization of filing equipment by size of company appears in Table 5. Completely centralized equipment, located in the general office, was found in only one company, a small company. Completely decentralized filing equipment was found in 27 per cent of the companies; and filing equipment which is a combination of centralized and decentralized was found in 67 per cent of the companies.

The location and extent of use of the decentralized filing equipment is recorded in Table 6. One small company, one medium company, and two large companies (27 per cent of the respondents) indicated that they had decentralized filing equipment fairly evenly distributed throughout the building. Three of the four companies stated that the filing equipment in all locations was used very frequently. The fourth company stated that filing equipment located in the computer vault was used very frequently, whereas equipment in the remaining locations was used less frequently.

Table 5
Extent of Centralization of Filing Equipment by Size of Company

Location	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
	No.	No.	No.		
Completely centralized	1	-	-	1	7
Completely decentralized	1	1	2	4	27
Combination of the above	3	4	3	10	67

Table 6

Location and Extent of Use of Decentralized Filing Equipment
by Individual Company

Company	Location of Decentralized Filing Equipment	Percentage of Total Files in each Location	Extent of Use			
			Very Frequent	Frequent	Moderate	Occa- sional
A-- small	Vault	20	x			
	Program dept.	20	x			
	Correspondence dept.	20	x			
	Operations dept.	20	x			
	Client dept.	20	x			
F-- medium	Accounting dept.	20	x			
	Credit dept.	20	x			
	Sales dept.	20	x			
	Service dept.	20	x			
	Parts dept.	20	x			
M-- large	Computer vault	25	x			
	Personnel dept.	20		x		
	Library	10			x	
	Secretarial dept.	10				x
	Controller's dept.	10			x	
	Treasurer's dept.	10			x	
	Administrative services	10			x	
	Office services	5				x
O-- large	Vice president, administrative services, and employee relations	10	x			
	Marketing	10	x			
	Engineering	10	x			
	Transportation	10	x			
	Real estate	10	x			
	Equipment	10	x			
	Express	10	x			
	Law	10	x			
	Medical	10	x			
	Claims	10	x			

The location and extent of use of filing equipment identified as a combination of centralized and decentralized are recorded in Table 7. Of the ten companies (67 per cent of the respondents) having a combination of centralized and decentralized filing equipment, five companies (three small, one medium, and one large) had 75 per cent or more of their filing equipment in a central location. The remaining five companies (three medium and two large) had from 40 to 60 per cent of their filing equipment in a central location. Six of the ten companies indicated that the central location was the main office or the administrative office; two companies indicated that the central location was the accounting department; one company indicated that the central location was the filing room; and one company indicated that the central location was the library. In each of these companies, the decentralized filing equipment was scattered throughout the remaining locations. The respondents indicated that most of the filing equipment in the various locations was used very frequently.

An analysis of the data by size of company reveals that most companies in each size group retained filing equipment in a combination of centralized and decentralized locations. Only one small company retained its equipment in a completely centralized location. It is probable that the small number of records to be retained made this arrangement practical. In the fourteen remaining companies, the filing equipment was distributed throughout the building. It is possible that this dispersal of filing equipment permits faster record retrieval and reduces misfiling and congestion at the files. These data support the finding of other researchers that office employees perform tasks involving the use of records.

Table 7

Location and Extent of Use of Filing Equipment that is a Combination of Centralized and Decentralized by Individual Company

Company	Location of Centralized and Decentralized Filing Equipment	Percentage of Total Files in each Location	Extent of Use			
			Very Frequent	Frequent	Moderate	Occasional
C-- small	Office (front) Office (back)	90 10	x			x
D-- small	Administrative dept. Legal survey dept. Building services dept. Engineering dept. Planning dept.	80 5 5 5 5	x x x x x			
E-- small	Filing room Consultants' files	80 20	x x			
G-- medium	Accounting dept. Warehousing division Executive offices	60 30 10	x x x			
H-- medium	Main offices Other offices	75 25	x	x		
I-- medium	Central office Managers' offices Other offices	60 25 15	x x	x		

Table 7 (continued)

Company	Location of Centralized and Decentralized Filing Equipment	Percentage of Total Files in each Location	Extent of Use			
			Very Frequent	Frequent	Moderate	Occasional
J-- medium	Accounting dept.	50	x			
	Purchasing dept.	30		x		
	Administrative dept.	10		x		
	Data dept.	5		x		
	Credit dept.	3		x		
L-- large	Order desk	2		x		
	Library	80	x			
	Industrial division	15	x			
	Current files	5	x			
K-- large	Main office	40	x			
	Individual offices (15)	60	x			
N-- large	Administrative office	50	x			
	Sales area	10		x		
	Manager's office	10			x	
	Customer assistance	10				
	Credit and collection	10				
	Personnel office	5	x			
	Customer representative	5		x		

Filing Systems: Questions 4, 5, 6, 7, and 8

Question 4 attempted to determine the type or types of filing systems in use and the rank order in terms of frequency of use. The data collected are summarized in Tables 8 and 9.

The types of filing systems in use by size of company are summarized in Table 8. An analysis of the data reveals that the alphabetic name filing system was the most widely used system (93 per cent of the companies), followed by the subject filing system (87 per cent of the companies), and the numeric filing system (80 per cent of the companies). The least used filing system was the geographic, employed by only 33 per cent of the companies. None of the companies used a phonetic system, a commercial system, or a system listed in the category "other."

An analysis of the data by size of company indicates that all seven filing systems in use (alphabetic name, geographic, subject, numeric, alpha-numeric, chronological, and reminder/tickler) were found in small, medium, and large companies. The alpha-numeric, chronological, and reminder/tickler filing systems were less prevalent in small companies. An analysis of the data also reveals that in small companies, an average of 3.6 different filing systems were used; in medium companies, an average of 5 different systems were used; and in large companies, an average of 5.6 different systems were used. The number of different filing systems used varied from one to seven. One small company had only one system, and one large company indicated that it used seven systems.

Table 8
Types of Filing Systems in Use by Size of Company

Filing System	Size of Company			Total N=15
	Small N=5	Medium N=5	Large N=5	
	No.	No.	No.	%
Alphabetic name	5	5	4	14 93
Geographic	1	1	3	5 33
Subject	4	4	5	13 87
Numeric	3	5	4	12 80
Alpha-numeric	1	3	4	8 53
Chronological	2	3	4	9 60
Reminder/tickler	2	4	4	10 67
Phonetic	-	-	-	-
Commercial	-	-	-	-
Other	-	-	-	-

The rank order of filing systems by frequency of use is recorded in Table 9. It is obvious from an examination of Table 9 that in some companies certain filing systems received equal ranking. An analysis of the data reveals that the alphabetic name, subject, and numeric filing systems were the most frequently used. The alphabetic name system was ranked first by 60 per cent of the companies, and second or third by the remaining 40 per cent of the companies. The numeric system was ranked first by 40 per cent of the companies, and first, second, or third by 80 per cent of the companies. The subject system was ranked first by 33 per cent of the companies, and first, second, or third by 87 per cent. The least frequently used filing system was the reminder/tickler, which was given the lowest ranking by nine of the ten companies using that system.

An analysis of the data by size of company reveals no distinct differences in the rank order of filing systems by frequency of use.

Question 5 attempted to determine the forms in which records are retained, the percentage of records retained in each form, and the filing system or systems used. The data are summarized in Tables 10, 11, and 12.

Table 10 records the forms in which records are retained by size of company. An analysis of the data reveals that records were retained in paper form by 100 per cent of the companies, and in card form by 73 per cent of the companies. Of the non-paper forms, microfilm records were retained by 13 per cent of the companies, microfiche records by 27 per cent, computer cards by 33 per cent, and computer tapes by 33 per cent. No other forms of record retention were used.

Table 10
Forms in which Records are Retained by Size of Company

Form	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
Papers	5	5	5	15	100
Cards	4	4	3	11	73
Microfilm	-	-	2	2	13
Microfiche	-	1	3	4	27
Other microform	-	-	-	-	-
Computer cards	-	3	2	5	33
Computer tapes	-	2	3	5	33
Other	-	-	-	-	-

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An analysis of the data by size of company reveals that the size of company appears to affect the forms in which records were retained. No small company retained non-paper records whereas medium and large companies did retain such records. More large companies retained microfiche records than did medium companies. It is possible that the absence of non-paper records in small companies may be attributed to the small volume of records and the cost of producing and retaining such records.

The percentage of records stored by form and size of company is summarized in Table 11. Nine companies (60 per cent) retained 90 per cent or more of their records in paper and card forms; and thirteen companies (87 per cent) retained 60 per cent or more of their records in paper and card forms. In the two companies, one medium and one large, which stored fewer than 60 per cent of their records in paper and card forms, the medium company retained 45 per cent of its records in those forms, and the large company retained 35 per cent.

Of the four non-paper forms of record retention used (microfilm, microfiche, computer cards, and computer tapes) computer tapes accounted for the largest percentage, followed, in descending order, by computer cards, microfiche, and microfilm.

It may be concluded that paper and cards were the forms used to retain the largest percentage of records in the companies included in the study; and they were the only forms used by the small companies. Non-paper records were retained by 60 per cent of the companies and represented from .5 to 65 per cent of the total records. However, only three companies (two medium and one large) retained 30 per cent or more of their total records in non-paper forms, and only two

companies, (one medium and one large) retained 50 per cent or more of their total records in non-paper forms.

An analysis of the data by size of company reveals that no small company used non-paper records; four medium companies used non-paper records; and all five companies used non-paper records. Thus, it appears that larger companies tend to retain records in non-paper forms.

The types of filing systems used to retain various forms of records by size of company are recorded in Table 12. It is obvious from an examination of Table 12 that in some companies more than one filing system was used to retain one form of record.

The alphabetic name filing system was used by 93 per cent of the companies to retain papers, and the subject and numeric systems were each used by 73 per cent of the companies. The reminder/tickler system, used by 27 per cent of the companies, was the least used system.

An analysis of the data by size of company reveals no noteworthy differences in the filing systems used to retain papers. The alphabetic name, the subject, and the numeric systems, the most popular systems in use to retain papers, were used by companies in all size groups.

The alphabetic name system was used to retain cards in 67 per cent of the companies, and the subject system in 47 per cent of the companies. The geographic system, the least used system, was used to retain cards in only one company, a large company.

An analysis of the data by size of company reveals that no small or medium company used the geographic or numeric system to retain

Table 12

Types of Filing Systems Used to Retain Various Forms of Records by Size of Company

Filing System	Form of Records by Size of Company											
	Papers				Cards				Microfilm			
	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15
	No.	No.	No.	%	No.	No.	No.	%	No.	No.	No.	%
Alphabetic name	5	5	5	93	3	4	3	10 67	-	-	-	1
Geographic	1	1	3	33	-	-	1	1 7	-	-	-	-
Subject	4	3	4	73	2	2	3	7 47	-	-	1	7
Numeric	3	5	3	73	-	-	2	2 13	-	-	1	7
Alpha-numeric	1	2	3	40	-	1	1	2 13	-	-	-	-
Chronological	1	1	3	33	1	1	1	3 20	-	-	-	-
Reminder/tickler	-	3	1	27	2	1	2	5 33	-	-	-	-
Phonetic	-	-	-	-	-	-	-	-	-	-	-	-
Commercial	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-

Table 12 (continued)

Filing System	Form of Records by Size of Company													
	Microfiche				Computer Cards				Computer Tapes					
	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15	Small N=5	Medium N=5	Large N=5	Total N=15		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	%
Alphabetic name	-	-	1	1	7	3	-	3	-	1	1	2	13	
Geographic	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subject	-	1	1	2	13	-	-	-	-	-	-	-	-	
Numeric	-	-	3	3	20	1	1	2	-	1	1	2	13	
Alpha-numeric	-	-	-	-	-	-	1	1	-	-	1	1	7	
Chronological	-	-	1	1	7	-	-	-	-	-	-	-	-	
Reminder/tickler	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phonetic	-	-	-	-	-	-	-	-	-	-	-	-	-	
Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	

cards, and that no small company used the alpha-numeric system for that purpose.

No small or medium companies retained records in microfilm form. Of the two large companies using microfilm records, one employed the numeric filing system, and the other employed the subject system.

No small company retained records in microfiche form. Medium and large companies retained microfiche records using the alphabetic name, subject, numeric, and chronological filing systems. The numeric system was used by more companies than were the other systems.

No small company used computer cards to retain records. Medium and large companies retained computer cards using the alphabetic name, numeric, and alpha-numeric filing systems. The alphabetic name system was used by more companies than were the other systems.

No small company used computer tapes to retain records. Medium and large companies retained computer tapes using the alphabetic name, numeric, and alpha-numeric filing systems. The alphabetic-name and numeric systems were used by more companies than was the alpha-numeric system.

It may be concluded that the alphabetic name and the numeric filing systems were the filing systems in most use to retain non-paper records in medium and large companies. Small companies did not retain non-paper records.

Question 6 attempted to determine the types of filing equipment used to retain various forms of records by size of company. The data are recorded in Table 13. It is obvious from an examination of the data in Table 13 that in some companies more than one type of filing equipment was used to store one form of record.

Table 13
Types of Filing Equipment Used to Retain Various Forms of Records by Size of Company

[illegible]

Papers were retained in drawer cabinets in 100 per cent of the companies, in lateral files in 73 per cent of the companies, and on shelves in 67 per cent of the companies.

An analysis of the data by size of company reveals no noteworthy differences in the types of equipment used to store papers.

Cards were retained in card files in 60 per cent of the companies. The other types of equipment used to retain cards, in descending order of use, were visible card files, rotary files, and drawer cabinets.

An analysis of the data by size of company reveals that no small company used visible card files to retain cards, and that no medium and large companies used drawer cabinets. Card files and rotary files were used by the three sizes of companies.

Microfilm records were retained in drawer cabinets in the large companies having such records. Microfiche records were retained in microfiche boxes in the medium and large companies having such records. Computer cards were retained in specially designed card files in the medium and large companies having such records. The types of equipment used to retain computer tapes in medium and large companies, in descending order according to the number of companies using them, were shelves, lateral files, and drawer cabinets.

It may be concluded from the data obtained that drawer cabinets were the most used type of equipment to store papers; card files were the most used type of equipment to store cards; and shelves were the most used type to store computer tapes. Drawer cabinets were the only equipment used to store microfilm; microfiche boxes were the only type of equipment used to store microfiche; and card files were

the only type used to store computer cards. An analysis of the data by size of company reveals no distinct differences in the types of equipment used to retain various forms of records by size of company.

Question 7 attempted to determine the number of companies preparing microform records, and the number, the sex, and the official job titles of the employees preparing such records within those companies. The data indicates that microform records were prepared in only one company, a large company, employing one male and one female designated as "Junior Clerical Staff."

In addition, Question 7 attempted to determine the availability of microform readers. The data are recorded in Table 14. An analysis of the data reveals that microfilm readers were available in two large companies, and microfiche readers in one medium and three large companies. These findings are consistent with those reported in Table 10 which presents the forms in which records were retained. All the companies retaining microfilm and microfiche records had readers available.

Question 8 attempted to determine the types of record retrieval and the frequency of use of each type. The data are recorded in Tables 15 and 16.

An analysis of the data in Table 15, which records the types of record retrieval used by size of company, indicates that manual record retrieval was used by 100 per cent of the companies, machine-assisted record retrieval was not used by any company, and computer-assisted record retrieval was used by 60 per cent of the companies. Two large companies using computer-assisted record retrieval did not have computer cards and tapes on file; those companies used the computer

Table 14
Number of Companies Using Microform Readers by Size of Company

Reader	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
	No.	No.	No.		
Microfilm	-	-	2	2	13
Microfiche	-	1	3	4	27
Other	-	-	-	-	-

Table 15
Types of Record Retrieval Used by Size of Company

Type of Record Retrieval	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5		
	No.	No.	No.	No.	%
Manual	5	5	5	15	100
Machine-assisted	-	-	-	-	-
Computer-assisted	-	4	5	9	60
Other	-	-	-	-	-

to obtain information stored elsewhere. The remaining companies using computer-assisted retrieval had the records stored in the building, as the data in Table 14 indicate.

An analysis of the data by size of company reveals that size appears to affect the types of record retrieval in use. No small company used computer-assisted record retrieval; whereas four medium and all five large companies used this method of retrieval.

Table 16 presents the rank order of types of record retrieval by frequency of use and size of company. It is obvious from an examination of the data in Table 16 that in some companies certain types of record retrieval received equal ranking. Manual record retrieval was ranked first by all fifteen companies. Computer-assisted record retrieval was ranked second by seven of the nine companies using this method, and ranked first by the remaining two companies (one medium and one large). Thus, it may be concluded that thirteen of the fifteen companies (87 per cent) considered manual record retrieval to be the most frequently used method of retrieving records; the remaining two companies considered manual and computer-assisted record retrieval to be used with equal frequency. No company used machine-assisted record retrieval.

An analysis of the data by size of company reveals that all small, medium, and large companies ranked manual record retrieval first in frequency of use, no small company used computer-assisted record retrieval, and most medium and large companies which used computer-assisted record retrieval ranked it second.

Table 16
Rank Order of Types of Record Retrieval by Frequency of Use and Size of Company

Type of Record Retrieval	Rank Order by Frequency of Use														
	Small Companies					Medium Companies					Large Companies				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Manual	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Machine-assisted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer-assisted	-	-	-	-	-	2	-	2	2	1	2	2	2	1	2
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Filing Supplies: Question 9

Question 9 attempted to determine the types of filing supplies in use by size of company. The data are recorded in Table 17. Standard folders and compressors were used by 100 per cent of the companies; hanging folders, guides, dividers, plastic push-on tabs, self-adhesive tabs, and self-adhesive folder labels were used by 75 per cent or more of the companies; and cardboard tabs, colour-coded tabs, and colour-coded folder labels were used by 60 per cent of the companies. From an analysis of the data, it appears that more companies used self-adhesive folder labels, self-adhesive tabs, and plastic tabs than used the gummed varieties.

Folders with special features were used by 27 per cent of the companies. The special features were coloured folders (used by one medium and two large companies), folders with library cards and pockets (used by one large company), and heavy duty folders with fasteners in the middle (used by one large company). No additional types of filing supplies were identified.

An analysis of the data reveals that the supplies listed in the questionnaire were the types of supplies used in the offices included in the study. An analysis of the data by size of company reveals that no small company used folders with special features. There appears to be no noteworthy difference in the use of the other types of filing supplies by size of company.

Filing Personnel: Questions 10, 11, 12, 13, 14, and 15

Questions 10 and 11 attempted to determine the number and sex of full-time and "part-time" file clerks. It should be noted that in

Table 17

Number and Size of Companies Using
the Various Types of Filing Supplies

Filing Supplies	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5		
	No.	No.	No.	No.	%
Standard folders	5	5	5	15	100
Hanging folders	3	4	5	12	80
Folders with special features	-	1	3	4	27
Guides	5	3	5	13	87
Compressors	5	5	5	15	100
Dividers	4	5	5	14	93
Tabs: plastic push-on	4	4	5	13	87
Tabs: cardboard to type on	3	4	2	9	60
Tabs: self-adhesive	3	4	4	11	73
Tabs: gummed	2	2	3	7	47
Tabs: colour-coded	2	2	5	9	60
Folder labels: gummed	1	3	2	6	40
Folder labels: self-adhesive	5	4	5	14	93
Folder labels: colour-coded	4	3	2	9	60
Supplies with a commercial system	-	-	-	-	-
Other	-	-	-	-	-

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in this study the term "part-time" file clerk refers to any employee who performs filing tasks as part of his or her assigned work duties. The data are presented in Table 18.

Full-time file clerks were employed in one small company, two medium companies, and three large companies (40 per cent). These six companies employed a total of nineteen full-time file clerks, fourteen females and five males. An analysis of the data by size of company reveals that full-time male file clerks were employed in only large companies whereas full-time female file clerks were employed in small, medium, and large companies. The total number of full-time file clerks employed in large companies exceeded the total number employed in small and medium companies.

"Part-time" file clerks were employed in all fifteen companies included in the study. Of the 193 "part-time" file clerks employed, 141 were female and 52 were male. From an analysis of the data by size of company, it appears that the larger the company the greater the number of "part-time" file clerks. The average number of "part-time" file clerks in small companies was six, in medium companies eight, and in large companies twenty-five. The number of "part-time" file clerks per company ranged from two to fifty-five: three small companies each employed two, and one large company employed fifty-five.

An analysis of the data recorded in Table 18 reveals that a total of 212 full-time and "part-time" file clerks (155 females and 57 males) were employed in the 15 companies included in the study. The total number of office employees (excluding supervisors and managers) was 667. Thus, approximately one third of the office employees performed

Table 18
Number and Sex of Employees Performing
Filing Tasks by Size of Company

Size of Company	Full-Time File Clerks			"Part-Time" File Clerks*		
	Sex		Total	Sex		Total
	M	F		M	F	
Small						
A	-	-	-	7	11	18
B	-	-	-	-	2	2
C	-	-	-	-	2	2
D	-	2	2	1	5	6
E	-	-	-	-	2	2
Total	-	2	2	8	22	30
Medium						
F	-	-	-	3	6	9
G	-	1	1	-	7	7
H	-	-	-	1	3	4
I	-	-	-	1	3	4
J	-	2	2	5	10	15
Total	-	3	3	10	29	39
Large						
K	-	1	1	2	8	10
L	2	4	6	1	12	13
M	-	-	-	6	30	36
N	-	-	-	-	10	10
O	3	4	7	25	30	55
Total	5	9	14	34	90	124

* The term "part-time" file clerk refers to any employee who performs filing tasks as part of his or her assigned work duties.

filing tasks. It is interesting to note the number of males performing filing tasks: approximately one quarter of both the full-time and "part-time" file clerks were male. These data support the finding of other researchers that most office employees perform tasks which include the use of records.

From an analysis of the data by size of company, it appears that the larger the company the greater the number of employees who perform filing tasks.

Question 12 attempted to determine which employees, other than full-time and "part-time" file clerks, have access to the files. The data are presented in Table 19. In 7 per cent of the companies (one), access to the files was given to only full-time and "part-time" file clerks; in 53 per cent of the companies, access to the files was given to every employee; and in 40 per cent of the companies (one small, one medium, and four large), access was given to only certain employees and/or to certain files. In the small company, only supervisors could use the files; in the medium company, only employees working in the office could use the files; and in the four large companies, one company gave every employee access to only the general files, one company gave every employee access to all the files except the confidential and personnel files, and two companies gave only non-technical staff access to the files.

It may be concluded that most companies permitted office employees to have unlimited access to all files, except confidential and personnel files, and 53 per cent of the companies permitted every employee in the building to have access to the files. An analysis of

Table 19
Access to the Files by Non-File Clerks
by Size of Company

Access	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
Yes	4	3	1	8	53
No	-	1	-	1	7
Limited	1	1	4	6	40

the data by size of company reveals that most small and medium companies permitted every employee in the building to have access to the files whereas most large companies permitted only office employees to have access to the files. This finding might be attributed to the confusion, error, and lack of confidentiality that may occur when a large number of employees are permitted to use the files.

Question 13 attempted to determine the level and sex of employees performing selected filing tasks. The intent of the question was to determine first, whether certain file-related tasks were performed by administrative or clerical employees, and second, if these file-related tasks were performed by males, females, or by both males and females. The data are recorded in Tables 20 and 21.

Table 20 summarizes the level of employee performing certain filing tasks by size of company. Administrative employees in most of the companies performed filing tasks involving decision-making, namely organizing and controlling the filing systems, making revisions of the filing systems, selecting and ordering the filing equipment, determining when records will be transferred to the inactive files, and determining when records will be destroyed. Clerical employees in most of the companies performed only the tasks of transferring records to the inactive files, and destroying records. Thus, the data appear to indicate that administrative employees performed the decision-making tasks affecting filing whereas clerical employees performed simple filing tasks delegated by the administrative employees.

An analysis of the data by size of company reveals that the level of employee performing certain filing tasks may be related to size of

Table 20
Levels of Employees Performing Selected Filing Tasks by Size of Company

Filing Tasks	Levels of Employees									
	Administrative					Clerical				
	Size of Company			Total N=15		Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%	Small N=5	Medium N=5	Large N=5	No.	%
Organizes and controls the filing systems	3	5	5	13	87	2	-	-	2	13
Makes revisions of the filing systems	2	5	4	11	73	3	-	1	4	27
Selects the filing equipment	3	5	5	13	87	2	-	-	2	13
Orders the filing equipment	5	4	5	14	93	-	1	-	1	7
Determines when records will be transferred to inactive files	3	5	5	13	87	2	-	-	2	13
Transfers records to inactive files	1	1	1	3	20	4	4	4	12	80
*Determines when records will be destroyed	3	5	5	13	87	-	-	-	-	-
*Carries out the destruction of records	2	2	1	5	33	1	3	4	8	53

* two small companies indicated that records were not destroyed

company. In small companies, the four tasks of organizing and controlling the filing systems, making revisions to the filing systems, selecting the filing equipment, and determining when records will be transferred to the inactive files were performed by both clerical and administrative employees. However, in most medium and large companies these tasks were performed by administrative employees. This finding probably reflects the greater amount of authority and responsibility delegated to clerical employees in small companies. The finding suggests that, except for small companies, clerical employees are not involved in making decisions affecting filing tasks.

The data recorded in Table 21 indicate the sex of employees performing selected filing tasks by size of company. An analysis of the data reveals that the two tasks of organizing and controlling the filing systems, and determining when records will be destroyed were performed mainly by males; and the task of transferring records to the inactive files was performed mainly by females. The remaining tasks were performed by both males and females.

An analysis of the data by size of company reveals that in medium and large companies certain filing tasks involving decision-making were performed by males, and certain simple filing tasks involving carrying out instructions were performed by females. However, in small companies the decision-making tasks were more likely to be performed by females. Thus, although Table 18 reveals that there were more female than male full-time and "part-time" file clerks, Tables 20 and 21 reveal that many of the decisions affecting filing were made by male administrative employees.

Table 21
Sex of Employees Performing Selected Filing Tasks by Size of Company

Filing Tasks	Performed by Males					Performed by Females					Performed by both Males and Females				
	Size of Company			Total N=15		Size of Company			Total N=15		Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%	Small N=5	Medium N=5	Large N=5	No.	%	Small N=5	Medium N=5	Large N=5	No.	%
	No.	No.	No.			No.	No.	No.			No.	No.	No.		
Organizes and controls the filing systems	2	4	3	9	60	2	1	-	3	20	1	-	2	3	20
Makes revisions of the filing systems	-	3	2	5	33	2	-	-	2	13	3	2	3	8	53
Selects the filing equipment	-	4	3	7	47	2	1	-	3	20	3	-	2	5	33
Orders the filing equipment	1	2	3	6	40	-	3	-	5	20	4	-	2	6	40
Determines when records will be transferred to inactive files	-	4	2	6	40	2	1	1	4	27	3	-	2	5	33
Transfers records to inactive files	-	2	-	2	13	4	2	3	9	60	1	1	2	4	27
*Determines when records will be destroyed	1	4	4	9	60	-	1	1	2	13	2	-	-	2	13
*Carries out the destruction of records	1	3	-	4	27	1	1	3	5	33	1	1	2	4	27

* two small companies indicated that records were not destroyed

Question 14 attempted to determine the official job titles of the full-time file clerks. Of the six companies employing full-time file clerks, five companies (one small, one medium, and three large) used the job title "File Clerk," and the sixth, a medium company, used the job title "File and Mail Clerk."

Question 15 attempted to determine the official job titles of the "part-time" file clerks and the percentage of the work day devoted to filing tasks. The data recorded in Table 22 list the official job titles which include filing tasks in each company. An analysis of the data reveals that filing tasks were included in a wide range of jobs, at various levels of employment from "President" to "Junior Clerk," even though the official job title did not include the term "File" or "Filing." The percentage of the work day devoted to filing tasks by "part-time" file clerks varied from 2 per cent to 75 per cent. The remainder of the employee's work day was devoted to the tasks normally associated with the official job title. An analysis of the data by size of company reveals no noteworthy differences.

Filing Tasks: Questions 16 and 17

Questions 16 and 17 attempted to determine the filing tasks performed by full-time and "part-time" file clerks by size of company, and the frequency of performance of the tasks. The data are recorded in Tables 23 and 24.

Table 23 summarizes the filing tasks performed by full-time file clerks by size of company. In the six companies employing full-time file clerks (one small, two medium, and three large), thirty-one filing tasks were performed daily, or two or three times a week, once a week, once a month, or seldom.

Table 22

Official Job Titles of "Part-Time" File Clerks and Percentage of the Work Day Devoted to Filing Tasks by Size of Company

Size of Company	Official Job Title *	Percentage of Work Day Devoted to Filing Tasks
Small		
A	President	15
	General manager	15
	Programmer	15
	Data control clerk	15
	Data operations supervisor	15
	Computer operator	15
	Receptionist	15
	Key punch operator	5
	Bursting, binding, and decollating clerk	5
B	Secretary	20
	Collection clerk	20
C	Forms designer	50
	Order clerk	20
D	Accounts receivable clerk	20
	Accounts payable clerk	20
	Work in progress (WIP) clerk	20
E	Receptionist	17
	Client service secretary	5
	Consultant	2
Medium		
F	Credit clerk	20
	Payroll clerk	15
	Service clerk	10
	Accounting clerk	10
	Receptionist	10
	Secretary	5
G	Cash clerk	20
	Order desk clerk	10
	Billing clerk	10
	Executive secretary	10

* Each job title may be used by more than one employee.

Table 22 (continued)

Size of Company	Official Job Title *	Percentage of Work Day Devoted to Filing Tasks
Medium		
H	File clerk	50
	Rating clerk	10
	Export clerk	5
	Accounting clerk	5
I	Cost clerk	30
	Comptometer operator	25
	Stenographer	10
	Office manager	5
J	Office manager	20
	Buyer	15
	Secretary	10
	Payroll clerk	5
	Credit manager	5
	Controller	5
	General manager	5
	Purchasing manager	3
	Data manager	3
	Accounts payable senior clerk	3
	Accounting assistant	3
	Cash receptionist clerk	3
	Sales manager	3
Large		
K	Manager of accounting	5
	Secretary to the president	5
	Secretary to the director of corporate affairs	5
	Secretary to the credit manager	5
	Personnel officer	5
	Secretary to the director of corporate stores	5
	Secretary to the purchasing manager	5
	Claims department clerk	5
	Traffic tower clerk typist	5
	Merchandising typist	5

* Each job title may be used by more than one employee.

Table 22 (continued)

Size of Company	Official Job Title *	Percentage of Work Day ^a Devoted to Filing Tasks
Large		
L	Drawing file clerk	85
	Mail clerk	40
	Library assistant	5
	Secretary	5
	Librarian	2
	Administrative assistant	1
M	Personnel clerk	15
	Accounting clerk	15
	Secretary	10
	Stenographer	10
N	Administrative secretary	50
	Management secretary	20
	Service secretary	20
	Sales secretary	10
	Personnel coordinator	10
O	Junior clerk	75
	Staff record clerk	50
	Clerk stenographer	25
	Secretary	10

* Each job title may be used by more than one employee.

Table 23 (continued)

Filing Tasks	Frequency of Performance by Size of Company													
	Once a Month					Seldom					Not Performed			
	S N=1	M N=2	L N=3	Total N=6	%	S N=1	M N=2	L N=3	Total N=6	%	S N=1	M N=2	L N=3	Total N=6
	No.	No.	No.	No.	%	No.	No.	No.	No.	%	No.	No.	No.	%
Date and time stamping	-	-	-	-	-	-	-	-	-	-	1	-	-	1 17
Release for filing	-	-	-	-	-	-	-	-	-	-	-	1	-	1 17
Inspect and index	-	-	-	-	-	-	-	-	-	-	1	2	1	4 67
Sort for filing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File by the alphabet	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File by subject	-	-	-	-	-	-	-	-	-	-	-	1	1	2 33
File by geographic location	-	-	-	-	-	-	-	-	-	-	-	2	1	3 50
File by number	-	-	-	-	-	-	-	-	-	-	-	-	1	1 17
File by alpha-numeric system	-	-	-	-	-	-	-	-	-	-	-	-	1	1 17
File by date	-	-	-	-	-	-	-	-	-	-	-	-	2	2 33
File by commercial system	-	-	-	-	-	-	-	-	-	-	-	-	2	2 33
File by sound	-	-	-	-	-	-	-	-	-	-	1	2	3	6 100
File by other	-	-	-	-	-	-	-	-	-	-	1	2	3	6 100
	-	-	-	-	-	-	-	-	-	-	1	2	3	6 100

Table 23 (continued)

Filing Tasks	Frequency of Performance by Size of Company													
	Daily				Two or Three Times a Week				Once a Week					
	S	M	L	Total	S	M	L	Total	S	M	L	Total		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	%
Assign file numbers	-	-	2	2	33	-	-	-	-	-	-	-	-	-
Charge out files or materials from the files	1	1	2	4	67	-	-	-	-	-	-	-	-	-
Locate and remove requested materials from the files	1	2	2	5	83	-	1	1	17	-	-	-	-	-
Refile requested materials	1	2	3	6	100	-	-	-	-	-	-	-	-	-
Follow-up released files or materials from the files	-	1	2	3	50	-	1	1	17	-	-	1	1	17
Make cross references	-	1	2	3	50	-	-	-	-	-	-	-	-	-
Keep a tickler or reminder system	-	1	1	2	33	-	-	-	-	-	1	1	1	17
Make folders and folder labels	1	1	3	5	83	-	-	1	17	-	-	-	-	-
Keep card indexes of various kinds	-	-	2	2	33	-	-	-	-	-	-	-	-	-
Search the files for lost materials	-	1	3	4	67	-	-	-	-	1	-	1	1	17
Handle classified or confidential files	-	1	1	2	33	-	-	-	-	-	-	-	-	-
Revise files	-	-	1	1	17	-	-	-	-	-	1	1	1	17
Transfer files to inactive files	-	-	2	2	33	-	-	-	-	1	-	1	1	17

Table 23 (continued)

Filing Tasks	Frequency of Performance by Size of Company											
	Once a Month				Seldom				Not Performed			
	S N=1	M N=2	L N=3	Total N=6	S N=1	M N=2	L N=3	Total N=6	S N=1	M N=2	L N=3	Total N=6
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Assign file numbers	-	-	-	-	-	-	-	-	1	2	1	4
Charge out files or materials from the files	-	-	-	-	-	-	-	-	-	1	1	2
Locate and remove requested materials from the files	-	-	-	-	-	-	-	-	-	-	-	-
Refile requested materials	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up released files or materials from the files	-	-	-	-	-	-	-	-	-	1	-	1
Make cross references	-	-	-	-	-	-	-	-	1	1	1	3
Keep a tickler or reminder system	-	-	-	-	-	-	-	-	1	1	1	3
Make folders and folder labels	-	-	-	-	-	-	-	-	-	-	-	-
Keep card indexes of various kinds	-	-	-	-	-	-	-	-	1	2	1	4
Search the files for lost materials	-	-	-	-	-	1	-	1	-	-	-	-
Handle classified or confidential files	-	-	1	1	-	-	-	-	1	1	1	3
Revise files	-	-	-	-	-	1	-	1	1	1	1	3
Transfer files to inactive files	1	-	1	2	-	-	-	-	-	1	-	1
				33								17

The following filing tasks were not performed by full-time file clerks: filing by a commercial system or a sound system, and using magnetic or motorized filing equipment. The following six filing tasks were performed by full-time file clerks in all six companies: sorting for filing, filing by the alphabet, locating and removing requested materials from the files, refiling requested materials, making folders and folder labels, and searching the files for lost materials. Full-time file clerks in five of the six companies (83 per cent) performed the following six filing tasks: date and time stamping, releasing for filing, filing by number, filing by an alpha-numeric system, following up released files or materials, and transferring materials to the inactive files.

The filing tasks performed "daily" by full-time file clerks in four of the six companies (67 per cent) were as follows: date and time stamping, releasing for filing, sorting for filing, filing by the alphabet, filing by number, filing by an alpha-numeric system, charging out files or materials, locating and removing requested materials, refiling requested materials, making folders and folder labels, and searching the files for lost materials.

The small number of companies having full-time file clerks does not permit the data to be analyzed by size of company.

The filing tasks performed by "part-time" file clerks by size of company are summarized in Table 24. Thirty-two filing tasks were performed daily, or two or three times a week, once a week, once a month, or seldom. The following filing tasks were not performed by "part-time" file clerks: filing by a commercial system or a sound system, and using motorized filing equipment. The following filing

Table 24

Frequency of Performance of Filing Tasks Undertaken by
"Part-Time" File Clerks by Size of Company (S, M, L)

Filing Tasks	Frequency of Performance by Size of Company													
	Daily							Two or Three Times a Week						
	S		M		L		Total N=15	S		M		L		Total N=15
	No.	N=5	No.	N=5	No.	N=5		No.	N=5	No.	N=5	No.	N=5	
	No.		No.		No.		%	No.		No.		No.		%
Date and time stamping	3	4	4	4	4	11	73	-	-	-	-	-	-	7
Release for filing	3	1	1	1	5	5	33	-	2	2	2	2	2	13
Inspect and index	-	1	1	5	6	6	40	1	2	-	-	-	-	-
Sort for filing	2	3	5	5	10	10	67	2	1	3	20	1	2	13
File by the alphabet	3	4	5	5	12	12	80	-	1	1	7	2	2	13
File by subject	2	1	4	4	7	7	47	2	1	3	20	-	1	7
File by geographic location	-	-	-	3	3	3	20	1	-	1	7	-	1	7
File by number	1	4	3	3	8	8	53	1	-	1	7	1	3	20
File by alpha-numeric system	-	2	3	3	5	5	33	1	-	1	7	-	-	-
File by date	-	3	4	4	7	7	47	1	1	2	13	1	1	7
File by commercial system	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File by sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File by other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Assign file numbers	-	-	-	3	3	3	20	2	1	-	-	1	-	7

Table 24 (continued)

Filing Tasks	Frequency of Performance by Size of Company														
	Once a Month					Seldom					Not Performed				
	S	M	L	Total	%	S	M	L	Total	%	S	M	L	Total	
	N=5	N=5	N=5	N=15		N=5	N=5	N=5	N=15		N=5	N=5	N=5	N=15	
	No.	No.	No.	No.		No.	No.	No.	No.		No.	No.	No.	No.	
Select and order file supplies	3	2	2	7	47	-	1	1	2	13	1	2	-	3	20
Install a filing system	-	-	-	-	-	2	3	3	8	53	3	2	2	7	47
Keep a clipping file (newspapers, magazine articles, etc.)	1	1	1	3	20	-	1	1	2	13	3	3	1	7	47
Keep a clipping book, any type	-	-	-	-	-	-	2	-	2	13	4	3	4	11	73
Use microfilm equipment	-	-	-	-	-	-	-	1	1	7	5	5	4	14	93
Use microfiche equipment	-	-	-	-	-	-	-	1	1	7	5	5	2	12	80
Use magnetic filing equipment	-	-	-	-	-	-	-	-	-	-	5	4	3	12	80
Use motorized filing equipment	-	-	-	-	-	-	-	-	-	-	5	5	5	15	100
Other	-	-	-	-	-	-	-	-	-	-	5	5	5	15	100

tasks were performed by "part-time" file clerks in 100 per cent of the companies: sorting for filing, filing by the alphabet, refiling requested materials, and making folders and folder labels. "Part-time" file clerks in 93 per cent of the companies performed the filing tasks of locating and removing requested materials from the files, and searching the files for lost materials. "Part-time" file clerks in 80 per cent of the companies performed the following eight filing tasks: date and time stamping, releasing for filing, filing by subject, filing by number, following up released files or materials, revising files, transferring materials to the inactive files, and selecting and ordering supplies.

The filing tasks performed "daily" by "part-time" file clerks in 73 per cent or more of the companies were date and time stamping, filing by the alphabet, locating and removing requested materials, and refiling requested materials. The filing tasks performed "seldom" by "part-time" file clerks in more than 50 per cent of the companies were disposing of files, selecting and ordering filing equipment, and installing a new filing system.

An analysis of the data by size of company reveals the following information. In small companies, "part-time" file clerks did not use magnetic filing equipment, microfilm equipment, or microfiche equipment. In medium companies, they did not use microfilm equipment, microfiche equipment, or charge out files or materials from the files. "Part-time" file clerks in the five small companies, but not in all of the five medium and five large companies performed the tasks of releasing for filing, and transferring files to the inactive files. "Part-time"

file clerks in the five medium companies, but not in all of the five small and five large companies performed the task of filing by number. "Part-time" file clerks in the five large companies, but not in all of the five small and five medium companies performed the following filing tasks: date and time stamping, inspecting and indexing, filing by subject, keeping a tickler or reminder filing system, handling classified or confidential files, revising the files, and selecting and ordering supplies.

"Part-time" file clerks performed the following filing tasks "daily" in the five large companies, but not "daily" in all of the five small and five medium companies: inspecting and indexing, sorting for filing, filing by the alphabet, refiling requested materials, keeping a tickler or reminder filing system, and making folders and folder labels.

An analysis of the data by size of company reveals that certain filing tasks were performed by "part-time" file clerks in large companies, but not by "part-time" file clerks in small and medium companies, and that certain filing tasks were performed more frequently by "part-time" file clerks in large companies than in small and medium companies. However, it may be concluded that most of the filing tasks listed were performed by "part-time" file clerks in all sizes of companies.

Comparing the filing tasks performed by full-time and "part-time" file clerks permits certain conclusions to be drawn. Except for magnetic filing equipment, which was not used by any full-time file clerks, the full-time and "part-time" file clerks included in the

study performed the same filing tasks. The following four filing tasks were performed by full-time and "part-time" file clerks in all companies: sorting for filing, filing by the alphabet, refiling requested materials, and making folders and folder labels. The following two filing tasks were performed by full-time file clerks in all six companies and by "part-time" file clerks in fourteen of the fifteen companies: locating and removing requested materials from the files, and searching the files for lost materials. Thus, it may be concluded that there are no noteworthy differences in the filing tasks performed by full-time and "part-time" file clerks in the companies included in the study.

Employment Qualifications: Questions 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27

Questions 18 and 19 attempted to determine the existence of pre-employment qualifications for full-time and "part-time" file clerks. Of the six companies (one small, two medium, and three large) having full-time file clerks, only two large companies had pre-employment qualifications. The pre-employment qualifications desired were as follows: one company required previous filing experience; the other company desired employees who could spell, put items in alphabetic order, recognize small variations in numbers, work under pressure, and produce neat handwriting.

Although all fifteen companies included in the study had "part-time" file clerks, only two companies (one medium and one large) had pre-employment qualifications. The medium company required previous filing experience; the large company, the company which required

pre-employment qualifications for full-time file clerks, had the same pre-employment qualifications for "part-time" file clerks, that is it desired employees who could spell, put items in alphabetic order, recognize small variations in numbers, work under pressure, and produce neat handwriting.

An analysis of the data by size of company reveals that no small company had pre-employment qualifications for full-time or "part-time" file clerks; no medium company had pre-employment qualifications for full-time file clerks; and only one large company had pre-employment qualifications for both full-time and "part-time" file clerks. From the small number of companies having pre-employment qualifications, it may be concluded that such qualifications were not usually required by the companies included in the study.

Question 20 attempted to determine the pre-employment qualifications the respondents considered desirable for full-time and "part-time" file clerks. Such qualifications were considered desirable by only two companies, one medium and one large. The medium company stated that it would prefer to hire employees who had the minimum of a high school education, and the large company stated that it would like full-time file clerks who had general business knowledge that could be applied to any industry. It may be concluded that most of the companies included in the study did not consider pre-employment qualifications for full-time and "part-time" file clerks to be desirable.

Questions 21 and 22 attempted to determine the existence of formal training for beginning full-time and "part-time" file clerks. Of the six companies having full-time file clerks, three companies

(one small, one medium, and one large) provided formal training. Formal training for "part-time" file clerks was provided by three of the fifteen companies (two small and one medium).

Question 23 asked the respondents to describe the formal training program offered by their companies to beginning full-time and "part-time" file clerks and to give the title of the person providing the training. The formal training given by only three companies (one small, one medium, and one large) to full-time file clerks is as follows: in the small company, a training program explaining the filing system was given by the Works in Progress Department Head; in the medium company, a training program outlining the filing system and procedures was given by the senior clerk; and in the large company, a training program outlining the general procedures to follow was given by a senior employee.

The formal training program given by only three companies (two small, and one medium) to "part-time" file clerks is as follows: in one small company, a general training program was given by a senior employee; in the other small company, a training program explaining the filing system was given by the Works in Progress Department Head; and in the medium company, the new employee was informed of his duties and how to perform them by a more experienced employee.

From an analysis of the data it may be concluded that formal training was given to beginning file clerks by 50 per cent of the companies having full-time file clerks, and by 20 per cent of the companies having "part-time" file clerks. An analysis of the data by size of company reveals that more small companies provided formal

training than did medium and large companies. However, the small number of companies providing formal training makes it difficult to draw conclusions, except to state that most of the companies included in the study did not provide formal training for beginning full-time and "part-time" file clerks.

Questions 24 and 25 attempted to determine the existence of informal training for beginning full-time and "part-time" file clerks, and the job titles of the persons providing the training. An analysis of the data indicates that the six companies employing full-time file clerks provided informal training. The training was provided by the following employees: by any employee in the small company; by the file clerk being replaced, a senior clerk, or the office manager in the two medium companies; and by a file clerk, an office employee, or the supervisor in the three large companies.

Informal training for "part-time" file clerks existed in thirteen of the fifteen companies and did not exist in one medium and one large company. The training was provided by the following employees: by the person being replaced, or by an office employee in the small companies; by the person being replaced, by an office employee, or by the office supervisor in the medium companies; and by the employee being replaced, by an office employee, or by the office supervisor in the large companies.

From an analysis of the data, it may be concluded that informal training existed in most of the companies for beginning full-time and "part-time" file clerks, and was provided by the person being replaced, by an office employee, or by the office supervisor. Also, those

companies providing formal training provided informal training. An analysis of the data by size of company reveals no noteworthy differences.

Question 26 attempted to determine the availability of written filing instructions and the source of such instructions. The data are recorded in Table 25. An analysis of the data indicates that written instructions were provided by 33 per cent (five) of the companies. Of these five companies, three had filing instructions located in a general company manual whereas two had filing instructions located in a separate filing manual. The finding that only 33 per cent of the companies had written filing instructions supports the statement made by Johnson (1958:120) that written filing instructions, although recommended by filing textbooks, are not common practice in business.

An analysis of the data by size of company reveals that three large companies, but only one small company and one medium company, had written instructions on filing; and only large companies had their instructions located in a separate filing manual. It is possible that larger organizations, because of their size and often several locations, need to record company policies on paper to ensure consistency of operations.

Question 27 relates to the training of persons who will perform filing tasks. The first part of the question sought to determine the opinions of respondents relating to the recommended source of filing training. Table 26 records the data. An analysis of the data indicates that only 7 per cent (one) of the respondents thought that the high school should be responsible for providing instruction in filing;

Table 25
Provision and Source of Written Filing Instructions by Size of Company

Company	Provision of Written Instructions		Source	
	No	Yes	Company Manual	Separate Filing Manual
Small (N=5)	4	1	1	-
Medium (N=5)	4	1	1	-
Large (N=5)	2	3	1	2
Total (N=15)	10	5	3	2

Table 26
Recommended Source of Filing Training
by Size of Company

Recommended Source	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
	No.	No.	No.		
High school	1	-	-	1	7
On-the-job	2	2	2	6	40
Other	2	3	3	8	53

40 per cent of the respondents thought that training should be provided on-the-job; and 53 per cent recorded an answer in the category "other." All the responses in the category "other" stated that filing instruction should be a combination of some high school instruction followed by on-the-job training. Thus, 60 per cent of the respondents indicated that the high school should provide some instruction in filing.

An analysis of the data by size of company indicates that the only company desiring the high school to provide all the instruction in filing was a small company, which may reflect the lack of personnel available in a small company to train new employees. All sizes of companies desired to participate in the training of beginning file clerks.

The second part of Question 27 assumes that the high school is a source of instruction in filing, and asks respondents to indicate the amount of instruction the high school should provide. An analysis of the data recorded in Table 27 reveals that a brief introduction to filing was preferred by 47 per cent of the respondents; a detailed course in filing was preferred by 13 per cent; and no instruction in filing was preferred by 40 per cent (those who had previously indicated that they would prefer to provide on-the-job training). It may be concluded that most of the respondents do not desire the high school to provide a detailed course in filing.

An analysis of the data by size of company reveals that only two companies, both small companies, wanted the high school to provide a detailed course in filing. A brief introduction to filing, and no instruction in filing were preferred equally by respondents in the remaining small, medium, and large companies. Again, the desire

Table 27
Recommended Amount of High School Filing Preparation
by Size of Company

Filing Preparation	Size of Company			Total N=15	
	Small N=5	Medium N=5	Large N=5	No.	%
	No.	No.	No.		
Brief introduction	1	3	3	7	47
Detailed course	2	-	-	2	13
None	2	2	2	6	40

expressed by small companies that the high school provide instruction in filing may reflect the lack of personnel available in small companies to train new employees.

The responses recorded in Table 27 support the views expressed informally to the researcher that companies expected and preferred to train on-the-job beginning employees who will perform filing tasks. However, many respondents stated that it would be helpful if beginning employees received in high school an introduction to basic filing practices. It is interesting to note the lack of formal training programs offered by the companies included in the study, yet the companies stated that they preferred to train beginning employees on-the-job. It is possible that the informal training programs provided by 87 per cent of the companies are a practical and satisfactory method of training beginning employees in filing.

Question 28 sought to determine if beginning full-time file clerks were weak in any areas, what the weaknesses were, and what the high school could do to remedy the weaknesses. An analysis of the data reveals that four of the six companies having full-time file clerks (one small, one medium, and two large companies) indicated that they perceived weaknesses in beginning full-time file clerks. Lack of experience was identified by the small company, but the respondent did not believe that the high school could remedy this weakness. Lack of filing knowledge and unsatisfactory job attitude were identified by the medium company. The respondent recommended that business education teachers be exposed to the job situation. Lack of railway terminology was identified by one of the two large companies. The remedy suggested was a high school introductory course on railway

terminology. Inability to discriminate when filing, inaccuracy, and irresponsibility were identified by the other large company. The respondent did not believe it was possible for the high school to improve students in these areas.

Question 29 sought to determine if beginning "part-time" file clerks were weak in any areas, what the weaknesses were, and what the high school could do to remedy the weaknesses. An analysis of the data reveals that six of the fifteen companies having "part-time" file clerks (one small, two medium, and three large companies) indicated that they perceived the following weaknesses in beginning "part-time" file clerks. Lack of experience was identified by the small company, but the respondent did not believe the high school could remedy this weakness. Inability to spell was identified by one of the two medium companies. The respondent recommended that the high school teach students to read with comprehension. Lack of filing knowledge and unsatisfactory job attitude were identified by the other medium company. The respondent recommended that students in high school be taught alphabetic filing, and filing procedures, and that business education teachers be exposed to office work. Inability to spell was identified by one of the three large companies. Lack of filing knowledge and lack of appreciation of the importance of filing were identified by the second large company. Lack of ability to discriminate when filing, inaccuracy, and irresponsibility were identified by the third large company. The respondent recommended that the high school attach more prestige to filing, and stress the importance of filing in clerical work.

One large company responded that its beginning "part-time" file clerks had no weaknesses, but it had found that high school work experience students did not appreciate the importance of filing for effective office operation.

From an analysis of the data recorded in Questions 28 and 29, it may be concluded that 67 per cent of the companies having full-time file clerks, and 40 per cent of the companies having "part-time" file clerks perceived beginning file clerks to have weaknesses. Some of the weaknesses recorded related specifically to filing, and the remaining weaknesses recorded related to job attitude and general education. The respondents recommended that the high school teach filing and improve the general level of education, and that business education teachers be exposed to office work. Some respondents stated that it was not possible for the high school to improve the weaknesses.

An analysis of the data by size of company reveals that small, medium, and large companies are fairly evenly divided as to the existence of, or lack of weaknesses in beginning full-time and "part-time" file clerks. However, it should be noted that the responses probably reflect the respondent's own personal experience.

Anticipated Short-Term and Long-Term Changes: Questions 30 and 31

Questions 30 and 31 attempted to determine the number of companies anticipating short-term and long-term changes which will affect filing within their own company. The data are recorded in Table 28.

An analysis of the data indicates that short-term changes were anticipated by five, or 33 per cent of the companies, and long-term

changes were anticipated by four, (or 27 per cent of the companies. Three small companies and two large companies anticipated short-term changes. One small company anticipated having a computer terminal by the fall of 1978 which would reduce the flow of paper printouts presently being received from another branch; but no personnel changes were anticipated. The second small company expected to buy new drawer filing cabinets which, it was believed, would improve the speed of filing by permitting more subdivisions and separate files. The third small company expected to simplify its system of card filing. One of the two large companies expected to introduce a company training program in filing procedure which, it was hoped, would improve efficiency and reduce errors in filing. The other large company planned to introduce a signing procedure for the withdrawal of confidential files, to be the responsibility of the manager. It was hoped that this procedure would permit better control of these files.

Long-term changes were anticipated by one medium and three large companies. The medium company was contemplating changing all paper documents relating to customer sales to microfilm records to improve efficiency and reduce storage space. The effect on personnel was not known, but personnel changes were anticipated. Of the three large companies anticipating long-term changes, one company planned to introduce computer-assisted filing within the next three to five years, but could supply no details. The second large company was considering introducing microfilm records within the next three to five years to decrease the storage space required and to increase the speed of information retrieval. This company anticipated reducing the

number of general clerical staff, but hiring better qualified staff. The third company anticipated placing more emphasis on records management and introducing, by 1980, a centralized filing system using computer or microfiche records. This company assumed that these changes would require hiring employees with specialized records management qualifications.

From an analysis of the data, it may be concluded that only 33 per cent of the companies anticipated short-term changes, and only 27 per cent of the companies anticipated long-term changes. The short-term changes anticipated by the companies appear to be concerned with improving the daily operation of the filing systems, whereas the long-term changes appear to be concerned with increasing efficiency in records management, specifically the need to decrease the amount of paper records retained, reduce the storage space required, and increase the speed of information retrieval.

An analysis of the data by size of company reveals that short-term changes were anticipated by small and large companies, and long-term changes were anticipated by medium and large companies. Both short-term and long-term changes were anticipated by only large companies. It is possible that large companies, handling a great volume of records, are aware of the need for efficiency in records management.

Chapter VI presents the summary, the major findings and conclusions, and recommendations.

CHAPTER VI

SUMMARY, MAJOR FINDINGS AND CONCLUSIONS, AND RECOMMENDATIONS

One of the goals of a Business Education program is to graduate students who are prepared to perform entry-level jobs as they exist in the labour market. Basing occupational training upon actual job performance in the office requires identification of the tasks performed in the office and assessing the anticipated changes and the impact of those changes upon office jobs and job requirements.

Unfortunately, there is a lack of current data on the filing tasks performed by office employees in Edmonton which would permit those involved with curriculum development in Business Education to determine the relevance of the existing filing curriculum.

The purposes of the present study were to identify the filing equipment, systems, supplies, personnel, tasks, and employment qualifications and training associated with filing, and to identify the anticipated changes which might affect filing in selected private (non-governmental) business and industrial enterprises in Edmonton. The study also attempted to determine if the filing equipment, systems, supplies, personnel, tasks, employment qualifications and training, and anticipated changes differed in small, medium, and large enterprises.

The population of the study consisted of business and industrial enterprises having membership in the Administrative Management Society

in Edmonton during the 1977-78 membership year. Using the number of office employees as a basis for determining size, the researcher classified the business and industrial enterprises as small, medium, and large, and randomly selected five from each size category. The fifteen enterprises comprised the sample to which the questionnaire developed by the researcher was administered.

A questionnaire was submitted personally by the researcher to the employee in charge of filing in each of the fifteen enterprises and was completed using an interview procedure. The data collected were tabulated and summarized in terms of frequencies and percentages, and comparisons were made among the three sizes of enterprises.

MAJOR FINDINGS AND CONCLUSIONS

The major findings and conclusions derived from the study are summarized and presented in this chapter as responses to the questions appearing in Chapter I of the study, pages 9, 10, and 11.

1. What types of filing equipment are in use? Drawer cabinets, lateral files, shelves, and card files were the four types of equipment used by the greatest number of companies included in the study. Drawer cabinets were the only type of equipment used by all fifteen companies included in the study.

2. What is the extent of use of each type of equipment? Drawer cabinets were the most frequently used type of equipment, followed by lateral files.

3. What is the rank order of filing equipment according to the number of items stored or filed? Drawer cabinets were ranked first or

second by 100 per cent of the companies; lateral files were ranked first or second by 67 per cent of the companies; and shelves were ranked first or second by 47 per cent of the companies.

4. To what extent is filing equipment coordinated? Filing equipment is comprised of uncoordinated units in all the companies included in the study.

5. To what extent is filing equipment centralized? Completely centralized filing equipment was found in only one company (7 per cent), a small company. Completely decentralized filing equipment was found in 27 per cent of the companies; and filing equipment which was a combination of centralized and decentralized was found in 67 per cent of the companies.

6. Where is filing equipment located? The centralized filing equipment was located in the general office. The completely decentralized filing equipment was distributed throughout the building. The filing equipment which was a combination of centralized and decentralized was distributed throughout the building, with most of the companies retaining the centralized portion in the main office or administrative office.

7. What is the frequency of use of filing equipment within each location? The filing equipment in most locations was used very frequently.

8. What types of filing systems are in use? The alphabetic name, subject, numeric, reminder/tickler, chronological, alpha-numeric, and geographic filing systems were the systems used in the companies included in the study. The foregoing systems are presented in descending order of the number of companies using them.

9. What is the rank order of frequency of use of the filing systems? The alphabetic name, subject, and numeric filing systems were the most frequently used filing systems.

10. In what form or forms are records retained? Records were retained in paper form in 100 per cent of the companies included in the study. Additional forms in which records were retained were cards in 73 per cent of the companies, computer cards in 33 per cent, computer tapes in 33 per cent, microfiche in 27 per cent, and microfilm in 13 per cent.

11. Which filing system or systems are used to retain paper records? The alphabetic name, subject, and numeric systems were the filing systems used by more than 70 per cent of the companies to retain papers.

12. Which filing system or systems are used to retain card records? The alphabetic name and subject systems were the filing systems used by the greatest number of companies to retain card records.

13. Which filing system or systems are used to retain non-paper records? The alphabetic name and numeric systems were the filing systems used by the greatest number of companies to retain non-paper records (microfiche, microfilm, computer cards, and computer tapes).

14. What type or types of filing equipment are used to retain paper records? Drawer cabinets, lateral files, and shelves were the types of filing equipment used to retain papers in more than 67 per cent of the companies.

15. What type or types of filing equipment are used to retain card records? Traditional card filing equipment, visible card filing equipment, rotary card filing equipment, and drawer cabinets were the

types used to retain cards. The foregoing types of equipment are presented in descending order of the number of companies using them.

16. What type or types of filing equipment are used to retain non-paper records? Drawer cabinets were the only type of filing equipment used to store microfilm; microfiche boxes were the only type of equipment used to store microfiche records; card filing equipment was the only type of equipment used to store computer cards; and shelves were the type of equipment used by the greatest number of companies to store computer tapes.

17. What are the official job titles and the sex of employees who prepare microform records? "Junior Clerical Staff" was the official job title of the one male and the one female who prepared microform records. Only one company--a large company--prepared such records.

18. Do file clerks use microfilm and microfiche readers? Microfilm readers were used by file clerks in 13 per cent of the companies (two large companies), and microfiche readers were used in 27 per cent of the companies (one medium and three large companies).

19. What method or methods of record retrieval are in use? Manual record retrieval was used by 100 per cent of the companies; and motorized record retrieval was not used by any company. Computer-assisted record retrieval was used by 60 per cent of the companies.

20. What is the frequency of use of the methods of record retrieval? Manual record retrieval was ranked first by 100 per cent of the companies. Two of the nine companies using computer-assisted record retrieval ranked this method first whereas seven companies ranked it second.

21. What types of filing supplies are in use? The following fourteen types of filing supplies are used: standard folders, hanging folders, folders with special features, guides, compressors, dividers, plastic push-on tabs, cardboard tabs, self-adhesive tabs, gummed tabs, colour-coded tabs, gummed folder labels, self-adhesive folder labels, and colour-coded folder labels. The only types of filing supplies used by all the companies included in the study were standard folders and compressors.

22. How many employees perform filing tasks in each enterprise? A total of 212 full-time and "part-time" (i.e. employees who performed filing tasks as part of the assigned work duties) file clerks (155 females and 57 males) performed filing tasks. These 212 file clerks comprised approximately one third of the total number of office workers employed in the 15 companies. Of these 212 file clerks, 19 (14 females and 5 males) were full-time file clerks, and 193 (141 females and 52 males) were "part-time" file clerks.

23. What proportion of the work day do employees spend performing filing tasks? By definition and in practice, full-time file clerks spent the entire day performing filing tasks. "Part-time" file clerks spent from 2 per cent to 75 per cent of the work day performing filing tasks, the remainder of the work day being devoted to the tasks normally associated with the official job title.

24. What is the sex of employees who perform filing tasks? Approximately three quarters of both the full-time and "part-time" file clerks were female, and approximately one quarter of both the full-time and "part-time" file clerks were male.

25. Which employees other than full-time and "part-time" file clerks have access to the files? In 53 per cent of the companies access to the files was given to every employee, and in 47 per cent of the companies access to the files was limited to particular employees and/or to particular files.

26. Who performs decision-making filing tasks, administrative or clerical employees? In most of the companies included in the study, administrative employees performed decision-making filing tasks. Clerical employees performed simple filing tasks delegated by administrative employees.

27. Are decision-making filing tasks performed by males, females, or both? Mainly males performed the tasks of organizing and controlling the filing systems, and determining when records will be destroyed; and mainly females performed the task of transferring records to the inactive files. Both males and females performed the tasks of making revisions to the filing systems, selecting the filing equipment, ordering the filing equipment, determining when records will be transferred to the inactive files, and carrying out the destruction of records. Although there were more female than male full-time and "part-time" file clerks, many of the decision-making filing tasks were performed by male administrative employees.

28. What are the official job titles of employees who perform filing tasks? "File Clerk" was the official job title of the full-time filing employees. The official job titles of those who performed "part-time" filing tasks included a wide range of personnel at various levels of employment from "President" to "Junior Clerk."

29. What filing tasks do employees perform? The following thirty-two filing tasks were performed in the companies included in the study:

1. Date and time stamping
2. Releasing for filing
3. Inspecting and indexing
4. Sorting for filing
5. Filing by alphabetic name
6. Filing by geographic location
7. Filing by subject
8. Filing by number
9. Filing by date
10. Filing by an alpha-numeric system
11. Assigning file numbers
12. Charging out files or materials from the files
13. Refiling requested materials
14. Following up released files or materials from the files
15. Locating and removing requested materials from the files
16. Making cross references
17. Keeping a tickler or reminder filing system
18. Making folders and folder labels
19. Keeping card indexes of various kinds
20. Searching the files for lost materials
21. Handling classified or confidential files
22. Revising files
23. Transferring files to the inactive files
24. Disposing of files
25. Selecting and ordering filing equipment
26. Selecting and ordering filing supplies
27. Installing a filing system
28. Keeping a clipping file (newspapers, magazine articles, etc.)
29. Keeping a clipping book, any type
30. Using microfilm equipment
31. Using microfiche equipment
32. Using magnetic filing equipment

Filing tasks not performed by any company included in the study were filing by a commercial system, by a sound system, and using motorized filing equipment.

The following filing tasks were performed "daily" by full-time file clerks in four of the six companies employing such clerks:

1. Date and time stamping
2. Releasing for filing
3. Sorting for filing

4. Filing by the alphabet
5. Filing by number
6. Filing by an alpha-numeric system
7. Charging out files or materials from the files
8. Locating and removing requested materials
9. Refiling requested materials
10. Making folders and folder labels
11. Searching the files for lost materials

The following filing tasks were performed "daily" by "part-time" file clerks (i.e. employees who performed filing tasks as part of the assigned work duties) in 73 per cent or more of the companies:

1. Date and time stamping
2. Filing by the alphabet
3. Locating and removing requested materials
4. Refiling requested materials

The following filing tasks were performed by full-time file clerks in all six companies employing such clerks:

1. Sorting for filing
2. Filing by the alphabet
3. Locating and removing requested materials from the files
4. Refiling requested materials
5. Making folders and folder labels
6. Searching the files for lost materials

The following filing tasks were performed by full-time file clerks in five of the six companies employing such clerks:

1. Date and time stamping
2. Releasing for filing
3. Filing by number
4. Filing by an alpha-numeric system
5. Following up released files or materials
6. Transferring materials to the inactive files

The following filing tasks were performed by "part-time" file clerks in all fifteen companies included in the study:

1. Sorting for filing
2. Filing by the alphabet
3. Refiling requested materials
4. Making folders and folder labels

The following filing tasks were performed by "part-time" file clerks in fourteen of the fifteen companies included in the study:

1. Locating and removing requested materials from the files
2. Searching the files for lost materials

The following filing tasks were performed by "part-time" file clerks in twelve of the fifteen companies included in the study:

1. Date and time stamping
2. Releasing for filing
3. Filing by subject
4. Filing by number
5. Following up released files or materials from the files
6. Revising files
7. Transferring materials to the inactive files
8. Selecting and ordering filing supplies

30. Do pre-employment qualifications exist for employees who perform filing tasks? Pre-employment qualifications for full-time file clerks existed in two of the six companies employing such clerks, and pre-employment qualifications for "part-time" file clerks existed in two of the fifteen companies.

31. What formal and/or informal training is given to employees who perform filing tasks? Formal training for full-time file clerks was given in three of the six companies employing such clerks, and formal training for "part-time" file clerks was given in three of the fifteen companies. Informal training for full-time file clerks was given in the six companies employing such clerks, and informal training for "part-time" file clerks was given in thirteen of the fifteen companies.

32. Who provides the training or assistance for employees who perform filing tasks? A senior employee in each company provided formal training for full-time and "part-time" file clerks. A file clerk,

a senior clerk, or an office manager provided informal training for full-time file clerks whereas an office employee, an office manager, or the person being replaced provided informal training for "part-time" file clerks.

33. Do written instructions on filing policies exist, and if they do, in what form? Written filing policies located in a general company manual or in a separate filing manual existed in 33 per cent of the companies included in the study.

34. Who should provide instruction in filing? Approximately half of the respondents stated that filing instruction should include a brief course in high school followed by on-the-job training. The other half of the respondents stated that instruction should be provided entirely on the job.

35. How much instruction in filing should be given in high school? Forty-seven per cent of the respondents stated that a brief introduction to filing should be provided by the high school; 13 per cent stated that a detailed course should be provided by the high school; and 40 per cent stated that no instruction in filing should be provided by the high school.

36. What weaknesses exist in beginning employees who perform filing tasks? Weaknesses were reported by four of the six companies having full-time file clerks and by six of the fifteen companies having "part-time" file clerks. The weaknesses related to filing, job attitude, and general level of education.

37. Are any short-term changes anticipated that will affect the filing process and/or personnel? Short-term changes were anticipated by 33 per cent of the companies. The anticipated changes appeared to be

related to improvements in the daily operation of the filing systems and procedures, but not to personnel.

38. Are any long-term changes anticipated that will affect the filing process and/or personnel? Long-term changes were anticipated by 27 per cent of the companies. The anticipated changes appeared to be related to improvements in records management. Decreases in the amount of paper records retained, reduction in storage space, and an increase in the speed of information retrieval were anticipated improvements. Respondents expected the foregoing changes to require fewer but better qualified personnel.

39. Do types of filing equipment, and filing systems, filing supplies, filing personnel, filing tasks, employment qualifications and training, and anticipated changes differ in small, medium, and large enterprises? The following differences were found in small, medium, and large enterprises.

Filing Equipment

- a. No small company used visible card files.

Filing Systems

- b. The alpha-numeric, chronological, and reminder/tickler filing systems were found in more medium and large companies than in small companies.
- c. In small companies, an average of 3.6 different filing systems were used; in medium companies, an average of 5 different filing systems were used; and in large companies, an average of 5.6 different filing systems were used.
- d. No small company retained records in microfilm, microfiche, computer card, or computer tape form, and no medium company

retained records in microfilm form. Large companies retained records in such forms.

- e. No small company had microfilm and microfiche readers, and no medium company had microfilm readers.
- f. No small company used computer-assisted record retrieval whereas medium and large companies used this method of retrieval.

Filing Supplies

- g. No small company used folders with special features; all the other types of filing supplies were used by small, medium, and large companies.

Filing Personnel

- h. Large companies employed the greatest number of filing employees, followed by medium and small companies, in descending order.
- i. Most small and medium companies permitted every employee to have access to the files; large companies tended to limit access to the files to particular employees and/or to particular files.
- j. In some small companies, clerical employees performed certain decision-making filing tasks whereas in medium and large companies these tasks were performed by administrative employees.
- k. In medium and large companies, certain decision-making filing tasks were performed by males whereas in small companies these tasks were performed by females.

Filing Tasks

- l. In small companies, "part-time" file clerks did not use magnetic filing equipment, microfilm equipment, or microfiche equipment; and in medium companies, "part-time" file clerks did not use microfilm

equipment, microfiche equipment, or charge out files or materials from the files. "Part-time" file clerks in large companies performed such tasks.

- m. Some filing tasks were performed more frequently by "part-time" file clerks in large companies than in small and medium companies; however, with the exception of the four filing tasks previously mentioned, the remaining twenty-eight of the thirty-two filing tasks were performed by "part-time" file clerks in all sizes of companies.

Employment Qualifications and Training

- n. Very few companies had pre-employment qualifications. No small company had pre-employment qualifications for full-time and "part-time" file clerks; and no medium company had pre-employment qualifications for full-time file clerks. Large companies had pre-employment qualifications for both full-time and "part-time" file clerks.
- o. Formal training was provided by more small companies than by medium and large companies.
- p. Written filing instructions were found in more large companies than in small and medium companies; and only large companies had filing instructions located in a separate filing manual.
- q. Only small companies desired the high school to provide detailed instruction in filing.

Anticipated Short-Term and Long-Term Changes

- r. Short-term changes were anticipated by small and large companies; and long-term changes were anticipated by medium and large companies. Thus, only large companies anticipated both short-term and long-term changes which would affect filing.

RECOMMENDATIONS

The findings of this study suggest the following recommendations:

1. Curriculum developers and business educators should examine the existing filing curriculum in the light of the findings of this study to determine if changes in the curriculum are required. Based on the findings of this study, it appears that a short introductory course in filing concentrating on filing equipment, systems, supplies, tasks, and possible changes in filing practices arising from technological developments may be sufficient preparation for future office employees.
2. Vocational business education students, particularly males, who are contemplating office careers should be made aware of the wide range of official job titles which include filing tasks, even though the term "file" or "filing" does not appear in the official job title. Also, these students should be made aware of the possible proportion of the work day which may be devoted to performing filing tasks, and the importance of these filing tasks to business.
3. In view of the finding that filing equipment, systems, supplies, personnel, tasks, employment qualifications and training, and anticipated changes do not differ greatly in small, medium and large enterprises, it is

recommended that there be no difference in the filing instruction offered to students, regardless of the size of enterprises in the local business community.

4. The present study should be replicated to identify the filing equipment, systems, supplies, tasks, personnel, and anticipated changes affecting filing in Provincial and Federal government departments in Edmonton, Alberta.
5. The present study should be replicated in other communities to determine the existence of regional differences, and to provide data which would enable educators to examine filing curricula in those regions for relevance.

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APPENDIX

FILING QUESTIONNAIRE

Name of Researcher/Interviewer: Morag Pansegrau

Background Information

Name of the company: _____

Address: _____

_____ Phone No. _____

Type of business: _____

Total number of employees:

Male _____ Female _____ Total _____

Total number of OFFICE employees (excluding management):

Male _____ Female _____ Total _____

Title of the person who is in charge of filing:

Name and title of the person answering the questionnaire:

Today's date: _____

PLEASE PLACE A CHECK MARK BESIDE THE CORRECT ANSWER OR ANSWERS, UNLESS OTHER INSTRUCTIONS ARE GIVEN.

FILING EQUIPMENT

1. What type or types of filing equipment are used by your business in this building?

Indicate the extent of use beside each "Yes" check mark, and rank the equipment according to the number of items stored or filed.

Type of Equipment	Use		Extent of Use				Rank Order of Filing Equipment According to Number of items Stored or Filed
	Yes	No	Very Frequent	Frequent	Moderate	Occasional	
Drawer cabinets							
Shelves							
Sliding shelves							
Lateral files (shelves that pull out like drawers)							
Card files							
Visible card files							
Rotary files							
Motorized files							
Other, describe below							

2. Is your filing equipment part of a coordinated office system (i.e. the storage hardware is a group of components which can be utilized according to the needs of the office at a particular time, and all the hardware is part of a functional work centre) or is the filing equipment made up of a number of uncoordinated units?

- a. Uncoordinated units that are not part of an office system. _____
- b. Filing equipment that is part of a total office system. _____
- c. A combination of a. and b.--describe. _____
- _____
- _____

3. Is the filing equipment in this building:

- a. completely centralized _____
- b. completely decentralized _____
- c. a combination of centralized and decentralized _____
- d. If the filing equipment is completely centralized, give the location:
- _____
- e. If the filing equipment is completely decentralized, list in the table on the following page each location and the percentage of total files in each location, and state if the use made in each location is very frequent, frequent, moderate, or occasional.

3. (continued) completely decentralized

Location	Percentage of Total Files in Each Location	Extent of Use			
		Very Frequent	Frequent	Moderate	Occasional

- f. If the filing equipment is a combination of centralized and decentralized, list in the table below each location and the percentage of total files in each location, and state if the use made in each location is very frequent, frequent, moderate, or occasional.

Location	Percentage of Total Files in Each Location	Extent of Use			
		Very Frequent	Frequent	Moderate	Occasional

FILING SYSTEMS

4. What type or types of filing systems are used in this building?

Rank each system according to the frequency of use.

System	Use		Rank Order of Frequency of Use
	Yes	No	
Alphabetic name			
Geographic			
Subject			
Numeric			
Chronological (date)			
Reminder/tickler			
Alpha-numeric			
Phonetic			
Commercial			
Other			

5. In what form or forms are filing records retained?

Beside each "Yes" check mark indicate the percentage of total documents stored in that form. Give the filing system or systems used to store each type of record by writing the appropriate letter of the alphabet from the list below* in the space provided.

- * A--alphabetic name E--numeric H--phonetic
 B--alpha-numeric F--chronological I--commercial system
 C--geographic (date) (name)
 D--subject G--reminder/tickler J--other, describe

Records	Use		Percentage of Total Documents Filed	Filing System Used
	Yes	No		
Papers				
Cards (printed or written)				
Microfilm				
Microfiche				
Other micro-form --name				
Computer cards				
Computer tapes				
Other--describe				

6. What type or types of equipment are used to store filing records?

Beside each "Yes" check mark indicate the type of equipment used to store the records by writing the appropriate letter of the alphabet from the list below* in the space provided.

- * A--drawer cabinets D--lateral files G--motorized files
 B--shelves E--visible card files H--card files
 C--sliding shelves F--rotary files I--other, describe

Records	Use		Equipment Used
	Yes	No	
Papers			
Cards (printed or written)			
Microfilm			
Microfiche			
Other microform, name			
Computer cards			
Computer tapes			
Other, describe			

7. a. Give the official job title of the person or persons who prepare microfilm, and the number and sex of the persons currently performing this task.
- b. Give the official job title of the persons or persons who prepare other types of microform, and the number and sex of the persons currently performing this task.
- c. Do the persons who perform filing tasks use:
- microfilm readers Yes _____ No _____
- microfiche readers Yes _____ No _____
- other special equipment, describe:

8. Indicate and rank according to frequency of use the types of record retrieval in use.

Type	Use		Frequency of Use
	Yes	No	
Manual retrieval			
Machine-assisted retrieval			
Computer-assisted retrieval			
Other, describe			

FILING SUPPLIES

9. Indicate by check marks the filing supplies in use.

Supplies	Use	
	Yes	No
Standard folders		
Hanging folders		
Folders with special features, describe at end		
Guides		
Compressors		
Dividers		
Tabs: plastic push-on		
Tabs: cardboard to type on		
Tabs: self-adhesive		
Tabs: gummed		
Tabs: colour-coded		
Folder labels: gummed		
Folder labels: self-adhesive		
Folder labels: colour-coded		
Supplies that accompany a commercial system, describe at end		
Other, describe		✓

FILING PERSONNEL

10. How many full-time file clerks do you employ in this building?

Male _____ Female _____ Total _____

11. How many of your employees in this building perform filing tasks as part of their assigned work duties, i.e. "part-time" file clerks?

Male _____ Female _____ Total _____

12. Which employees, other than full-time and "part-time" file clerks, use the files?

- a. every employee _____
- b. no other employee _____
- c. other, explain _____

13. Give the official job title of the person or persons who perform the following tasks:

- a. organizes and controls the filing systems _____
- b. selects the filing equipment _____
- c. orders the filing equipment _____
- d. makes revisions of the filing systems _____
- e. determines when records will be transferred to the inactive files _____
- f. transfers records to the inactive files _____
- g. determines when records will be destroyed _____
- h. carries out the destruction of records _____

Indicate below the sex of the person or persons performing the above tasks:

- | | | |
|--------------------|--------------------|--------------------|
| a. M _____ F _____ | d. M _____ F _____ | g. M _____ F _____ |
| b. M _____ F _____ | e. M _____ F _____ | h. M _____ F _____ |
| c. M _____ F _____ | f. M _____ F _____ | |

14. Give the official job title of the full-time file clerks.

15. List the official job titles of the employees who perform filing tasks as part of their assigned work duties, i.e. the "part-time" file clerks.

Beside each job title give the percentage of the work day that the person devotes to filing tasks and list the NON-filing tasks performed by the person that make up the remainder of the work day.

Official Job Title	Percentage of work day devoted to filing tasks	List other, NON-filing Tasks

FILING TASKS

16. Indicate by check marks the filing tasks performed by one or more of the FULL-TIME file clerks. Place check marks in the appropriate columns, depending on the frequency of performance. List at the end of the table activities performed by the FULL-TIME file clerks but not listed.

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Date and time stamp						
Release for filing				/		
Inspect and index						
Sort for filing			-			
File by alphabetic name						
File by geographic location						
File by subject						
File by number						
File by date						
File by alpha-numeric system						
File by sound						
File by commercial system						
File by other, describe						
Assign file numbers						

16. (cont.) Tasks of FULL-TIME File Clerks

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Charge out files or materials from the files						
Locate and remove requested materials from the files						
Refile requested materials						
Follow-up released files or materials from the files						
Make cross references						
Keep a tickler or reminder system						
Make folders and folder labels						
Keep card indexes of various kinds						
Search files for lost materials						
Handle classified or confidential files						
Revise files						
Transfer files to inactive files						

16. (cont.) Tasks of FULL-TIME File Clerks

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Dispose of files						
Select and order file equipment						
Select and order file supplies						
Install a filing system						
Keep a clipping file (news- papers, articles, etc.)						
Keep a clipping book, any type						
Use microfilm equipment						
Use microfiche equipment						
Use magnetic filing equipment						
Use motorized filing equipment						
Other: list below and check columns						

17. Indicate by check marks the filing tasks performed by one or more of the employees who perform filing tasks as part of their assigned work duties, i.e. "PART-TIME" file clerks.

Place check marks in the appropriate columns, depending on the frequency of performance.

List at the end of the table filing tasks performed by the "part-time" file clerks but not listed.

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Date and time stamp						
Release for filing						
Inspect and index					o	
Sort for filing						
File by alphabetic name						
File by geographic location						
File by subject						
File by number						
File by date						
File by alpha-numeric system						
File by sound						
File by commercial system						
File by other, describe						
Assign file numbers						

17. (cont.) Tasks of "PART-TIME" File Clerks

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Charge out files or materials from the files						
Locate and remove requested materials from the files		✓				
Refile requested materials						
Follow-up released files or materials from the files						
Make cross references						
Keep a tickler or reminder system						
Make folders and folder labels						
Keep card indexes of various kinds						
Search files for lost materials						
Handle classified or confidential files						
Revise files						
Transfer files to inactive files						

17. (cont.) Tasks of "PART-TIME" File Clerks

Tasks	Not Performed	Performed Daily	Performed Two or Three Times a Week	Performed Once a Week	Performed Once a Month	Performed Seldom
Dispose of files						
Select and order file equipment						
Select and order file supplies						
Install a filing system						
Keep a clipping book, any type						
Keep a clipping file (news- papers, articles, etc.)						
Use microfilm equipment						
Use microfiche equipment						
Use magnetic filing equipment						
Use motorized filing equipment						
Other: list below and check columns						

EMPLOYMENT QUALIFICATIONS AND TRAINING

18. Are there any pre-employment qualifications for persons who are to be employed full-time to perform filing tasks?

Yes _____ No _____

If "Yes," list below the qualifications required:

19. Are there any pre-employment qualifications related to filing for persons who are to perform filing tasks as part of their assigned work duties, i.e. "part-time" file clerks?

Yes _____ No _____

If "Yes," list below the qualifications required:

20. If you answered "No," to Questions 18 and/or 19 above, and you think that pre-employment qualifications are desirable, list below the qualifications and indicate if they are for full-time and/or "part-time" file clerks.

21. Do you give any type of formal training to new full-time file clerks?

Yes _____ No _____

22. Do you give any formal training in filing to new employees who are to perform filing tasks as part of their assigned work duties, i.e. "part-time" file clerks?

Yes _____ No _____

23. If you answered "Yes," to Questions 21 and/or 22, describe below the training program and indicate the persons taking part in the program.

24. Do you give any informal training such as guidance or "over-the-shoulder" assistance from a superior or co-worker to new full-time file clerks?

Yes _____ No _____

If "Yes," give the official job title of the person providing the assistance.

25. Do you give any informal training such as guidance or "over-the-shoulder" assistance from a superior or co-worker to new employees who are to perform filing tasks as part of their assigned duties, i.e. "part-time" file clerks?

Yes _____ No _____

If "Yes," give the official job title of the person providing the assistance.

26. Do you have a set of written instructions on filing policies?

Yes _____ No _____

If "Yes," are the instructions recorded in a company manual which covers all the procedures of the business, OR, are the instructions recorded in a separate book which deals exclusively with filing policies?

Company manual _____ Separate filing manual _____

27. The following questions relate to the training of persons who will perform filing tasks.

Place check marks beside the appropriate answers.

A. Who do you think should give training in filing?

a. The high schools should give training in filing. _____

OR

b. It is preferable to train filing employees on-the-job. _____

OR

c. Other, explain:

B. IF the high schools should give training in filing, how much training should the high schools give?

a. A brief introduction to the main types of filing systems, equipment, and duties. _____

OR

b. A detailed course which covers all aspects of filing and records management. _____

OR

c. Other, explain:

28. Are new, full-time file clerks weak in any areas?

Yes _____ No _____

If "Yes," list the weaknesses and state what you think the high schools can do to remedy the situation.

29. Are new employees who are to perform filing tasks as part of their assigned work duties, i.e. "part-time" file clerks weak in any areas?

Yes _____ No _____

If "Yes," list the weaknesses and state what you think the high schools can do to remedy the situation.

